

TAHOE REGIONAL PLANNING AGENCY

WINTER TRAVEL MODE SHARE SURVEY

Summary of Results

May 2008



NuStats

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1. INTRODUCTION

This report documents the methodology and summarizes the results of the 2008 Winter Travel Mode Share (WTMS) Survey for the Tahoe Basin. NuStats conducted the full survey from February 22 – March 1 on behalf of the Tahoe Regional Planning Agency (TRPA).

SURVEY PURPOSE

The purpose of the 2008 WTMS survey was to capture accurate and reliable winter travel mode share data of permanent residents, seasonal residents, and visitors to commercial and recreational sites within the Tahoe Basin. This survey will provide data necessary to support TRPA's efforts to update its long-range regional plan and will establish a baseline for future seasonal mode share surveys.

SURVEY DESIGN

Because the sample was a "choice" sample and not a probability sample, the resulting data set was neither weighted nor expanded to reflect population parameters. The complete sampling plan is provided in Appendix G of this report.

TRANSPORTATION ENVIRONMENT

Available transit service is an important factor in residents' and visitors' choice of mode. In winter 2008, services in the Tahoe Basin included the regularly scheduled transit services on both North and South shores, free evening shuttle on the North shore, and ski resort shuttles, including the extensive Heavenly Ski Resort bus network. In January 2008, BlueGo launched a new commuter route, the "Kingsbury Express", bringing commuters from the Minden/Garnerville area of Nevada to Stateline, NV.

SURVEY SUMMARY OUTCOMES

A total of 1,402 valid interviews were conducted. Of these, 691 were with full-time residents, 82 were with seasonal residents and 629 were with visitors. See Table 1 for further detail.

TABLE 1: SURVEY OUTCOMES BY RESIDENTIAL STATUS AND INTERVIEWING LOCATION

SITE OF INTERVIEWING LOCATION	FULL TIME RESIDENTS	SEASONAL RESIDENTS	VISITORS	TOTAL
North Shore	264	36	224	524
South Shore	427	46	405	878
Total	691	82	629	1,402



2. METHODOLOGY

SURVEYOR SELECTION AND TRAINING

The surveyor staff was secured through Blue Ribbon Personnel Services, a temporary employment agency located in Stateline, Nevada. Individuals selected to conduct data collection activities were required to have familiarity with recreational and commercial areas surrounding the Tahoe Basin area, have an outgoing personality, be a minimum of 21 years of age, have excellent speaking skills, and have reliable personal transportation.

Surveyors were required to attend a four-hour training session. During the training session, surveyors were advised about the purpose of the study, work schedule (survey times and location), dress code, and data collection methodology which stressed reading each question completely as worded, following skip patterns and full collection of all data elements.

The training session included a focused review of the questionnaire to familiarize the staff with each question and appropriate responses to be collected. Following the classroom style training session, surveyors broke out into groups of two and conducted mock interviews with each other prior to beginning actual data collection on the following day.

Documented training material was provided to each surveyor to retain as reference. A copy of the training manual is in Appendix E.

SURVEY SITES

TRPA staff and NuStats jointly selected 43 data collection sites (24 recreation and 19 commercial) based on the following criteria:

- Balance between North Lake Tahoe and South Lake Tahoe split (40% of collected data secured from North Lake Tahoe sites and 60% of collected data secured from South Lake Tahoe sites; to the greatest extent possible the 40/60 split was also maintained for the number of sites surveyed between North and South shores); and
- Anticipated activity level at each site during the winter season.

Table 2 identifies the selected commercial survey sites including location, and collection goal:

TABLE 2: COMMERCIAL SITE SELECTION AND COLLECTION GOAL

LOCATION	SAMPLE TYPE	SHORE	TARGET COLLECTION GOAL
Bijou/al Tahoe	Commercial	South	22
Dollar Hill	Commercial	North	6
Homewood Commercial	Commercial	North	6
Incline Village Commercial	Commercial	North	50
Kings Beach Commercial	Commercial	North	34
Kingsbury Community Plan	Commercial	South	23
Meyers	Commercial	South	22
North Casinos	Commercial	North	33
North Stateline Non Casino	Commercial	North	6
Round Hill Community Plan	Commercial	South	55
Sierra Tract	Commercial	South	23
Ski Run	Commercial	South	55
South Stateline	Commercial	South	67
South Y Commercial	Commercial	South	66
Stateline Community Plan	Commercial	South	67
Sunnyside	Commercial	North	5
Tahoe City	Commercial	North	50
Tahoe Vista Commercial	Commercial	North	5
Tahoma Commercial	Commercial	North	5
Total Collection Goal			600

Tables 3 identifies the selected recreational survey sites including location, and collection goal:

TABLE 3: RECREATIONAL SITE SELECTION AND COLLECTION GOAL

LOCATION	SAMPLE TYPE	SHORE	TARGET COLLECTION GOAL
Alpine Meadows (Backside)	Recreational	North	17
Bijou Cross Country Ski Area	Recreational	South	23
Camp Richardson Resort	Recreational	South	26
Commons Beach	Recreational	North	20
Cove East/Upper Truckee Marsh	Recreational	South	24
Diamond Peak Ski Resort	Recreational	North	50
El Dorado Beach/Boat Ramp	Recreational	South	21
Granlibakken Ski Resort	Recreational	North	20
Heavenly Ski Resort	Recreational	South	112
Homewood Ski Resort	Recreational	North	50
Incline Village Recreational Center	Recreational	North	20
Kahle Community Center and Park	Recreational	South	26
MS Dixie Entrance (at Zephyr Cove)	Recreational	South	24
North Tahoe Conference Center	Recreational	North	20
North Tahoe Regional Park	Recreational	North	50
Paige Meadows	Recreational	North	17
South Tahoe Ice Arena	Recreational	South	24
South Tahoe Recreation Center	Recreational	South	26
South Tahoe Senior Center	Recreational	South	22
Spooner Junction Snow Play Area	Recreational	South	23
Spooner Lake Cross Country Ski Resort	Recreational	North	24
Tahoe City Golf Course*	Recreational	North	16
Tahoe Cross Country Ski Area	Recreational	North	20
Zephyr Cove Marina/Resort	Recreational	South	75
Total Collection Goal			750

**Tahoe City Golf Course was removed from the recreational site list during data collection due to inability to access the site and an absence of any activity at the site.*

DATA COLLECTION METHODOLOGY

All data collection activities were conducted through an intercept interview methodology by trained staff. Interviews averaged four to five minutes and were conducted with one member of a traveling party (either visitor, seasonal resident or full-time resident) age 18 or older.

Surveyors were provided with sampling instructions prior to the start of data collection efforts at each survey site. The sampling instructions defined whether to conduct a census sample of every travel party encountered (at low activity sites), or sample every Nth travel party at higher activity sites. Table 4 identifies the sampling methodology conducted at each commercial site, while Table 5 provides sampling methodology at recreational sites.

TABLE 4: COMMERCIAL DATA COLLECTION METHODOLOGY

LOCATION	SAMPLING METHOD USED
Bijou/al Tahoe	Census
Dollar Hill	Census
Homewood Commercial	Census
Incline Village Commercial	Every 2nd travel party
Kings Beach Commercial	Every 2nd travel party
Kingsbury Community Plan	Census
Meyers	Census
North Casinos	Census
North Stateline Non Casino	Census
Round Hill Community Plan	Every 2nd travel party
Sierra Tract	Every 2nd travel party
Ski Run	Every 2nd travel party
South Stateline	Every 3rd travel party
South Y Commercial	Every 3rd travel party
Stateline Community Plan	Every 3rd travel party
Sunnyside	Census
Tahoe City	Every 2nd travel party
Tahoe Vista Commercial	Census
Tahoma Commercial	Census

TABLE 5: RECREATIONAL DATA COLLECTION METHODOLOGY

LOCATION	SAMPLING METHOD USED
Alpine Meadows (Backside)	Census
Bijou Cross Country Ski Area	Census
Camp Richardson Resort	Census
Commons Beach	Census
Cove East/Upper Truckee Marsh	Census
Diamond Peak Ski Resort	Every 3rd travel party
El Dorado Beach/Boat Ramp	Census
Granlibakken Ski Resort	Census
Heavenly Ski Resort	Every 3rd travel party
Homewood Ski Resort	Every 3rd travel party
Incline Village Recreational Center	Census
Kahle Community Center and Park	Census
MS Dixie Entrance (at Zephyr Cove)	Every 3rd travel party
North Tahoe Conference Center	Census
North Tahoe Regional Park	Census
Paige Meadows	Census
South Tahoe Ice Arena	Census
South Tahoe Recreation Center	Census
South Tahoe Senior Center	Census
Spooner Junction Snow Play Area	Census
Spooner Lake Cross Country Ski Resort	Census
Tahoe City Golf Course	Site not surveyed
Tahoe Cross Country Ski Area	Census
Zephyr Cove Marina/Resort	Every 3rd travel party

Surveyors were instructed to tally any travel party who refused to participate in the study. This refusal tally was used to calculate response rate. Overall, response rate for the study was 69% based on 1,404 completed surveys and 617 refusals (2 completed surveys were removed during the data processing stage). This is consistent with the 2006 Summer Mode Share survey where the overall response rate was 66%. Details are provided by site in Appendix F of this report along with a breakdown of the number of completed surveys / hour for each site.

Publicity

Bobbi Coulter of Coulter and Associates was responsible for the development and placement of a comprehensive media notice detailing the sponsor, purpose and dates of the upcoming study. The media notice was released to local print and electronic media sources approximately one week prior to data collection. A copy of the press release is in Appendix D.

Logistics

Following survey site selection, Coulter and Associates contacted appropriate individuals at each site to advise about the study purpose, secure permission to conduct survey activities at the site, and define the survey timeframe. Contact was made by a variety of modes including e-mail, telephone and U.S. mail services.

On January 7 and 8, TRPA and NuStats conducted an extensive site review at each of the 43 survey locations prior to the start of data collection in order to identify surveyor staging locations that would minimize bias for encountering respondents traveling by one specific travel mode. For example, surveyors were not staged in parking lots where they would encounter nearly 100% travel by private automobile. Nor were surveyors staged near bus stop locations where the majority of respondents would be traveling by public transportation mode.

A deliberate effort was made to stage surveyors at locations within a site that allow for the highest degree of intercepting potential respondents who may travel to the site by a variety of travel modes. These included main entrances (at parks and recreational centers for example), sidewalks (in front of commercial centers), or ski resort lift lines. Table 6 identifies the number of surveyors and their staging location at commercial survey sites. Table 7 shows the same information for recreational sites.

TABLE 6: SURVEYOR STAGING FOR COMMERCIAL LOCATIONS

LOCATION	STAGING LOCATION
Bijou/al Tahoe	1 from Safeway to Big Daddy's on Hwy. 50, 1 in Rite Aid strip center, 1 along Harrison Ave., 1 between Longs Drugs and Heidi's Restaurant, 1 from west of Safeway on both sides of street to Harrison
Dollar Hill	2 covering East and West side of Hwy 28 from 7-11 (Fabian Road) to Old Mill Road.
Homewood Commercial	2 covering both sides of Hwy 89 from Homewood Ski Resort to Post Office
Incline Village Commercial	1 at Raley's center and strip center on the north side of Hwy 28 and Village Blvd., 1 on south side of Hwy 28 from 7-11 center to stores in block with Starbucks, 1 at stores at corners of Southwood Blvd. and Village Center.
Kings Beach Commercial	1 from Beach Street to Beaver Street along both sides of Hwy 28.
Kingsbury Community Plan	1 on both sides of Kingsbury Grade from Hwy 50 to approximately Meadow Dr, 1 at Lakeside liquor store, 1 at Burger King area on Hwy 50.
Meyers	1 along Hwy 50 at gas station near Pioneer Trail and Apache Ave to Hwy 89, south on Hwy 89 to Shakori Dr then back to Hwy 50, continuing on the north side of Hwy 50 to Santa Fe Rd.
North Casinos	1 at Crystal Bay, Biltmore and Cal-Neva casino entrances (Goals revised by client)
North Stateline Non Casino	1 at stores on both sides of Hwy 28 from Biltmore parking lot to approximately Manor Ave. (Goals revised by client)
Round Hill Community Plan	2 along sidewalk in front of all stores on both sides of Hwy 50.
Sierra Tract	1 from Blue Lake to Lodi on both sides of Hwy 50.
Ski Run	1 near Chevron and stores along shore, 2 on each side of Ski Run from Hwy 50 to David Ln and Pioneer Trl.
South Stateline	1 at Raley's shopping center mall, including restaurants at front, 1 from Wildwood to Stateline along Hwy 50 and all side roads near Cedar Ave and Pine Blvd, 1 from Heavenly Village to Embassy Suites, 2 inside Heavenly Village.
South Y Commercial	1 person at Y Outlet shops and south on 50, 1 person on Millers Outlet side to north boundary on Hwy 50, 1 person at K-Mart center and south on Hwy. 50
Stateline Community Plan	2 from Stateline to Lake Parkway/Mont Bleu side, 2 from Stateline to Lake Parkway/Horizon side, 1 at casino back entrances on Mont Bleu side, 1 at casino back entrances on Horizon side
Sunnyside	1 covering both sides of Hwy 89 from General Store to Pineland Drive
Tahoe City	2 on North side of Hwy 28 from Lighthouse Center (East) to Albertson's at Hwy 28 and Hwy 89 intersection. 2 on South side of Hwy 28 from Lighthouse Center (East) to Chevron Station/raft rental (West) including Fanny Bridge and Comstock Village.
Tahoe Vista Commercial	1 from Agatam St. to Lauren on both sides of Hwy 28 and from Hwy 28 north on National Ave. on both sides of street.
Tahoma Commercial	1 person covering from laundry mart mini-mart to PDQ food mart on both sides of Hwy 89

TABLE 7: SURVEYOR STAGING FOR RECREATIONAL LOCATIONS

LOCATION	STAGING LOCATION
Alpine Meadows (backside)	1 at ski lift line.
Bijou Cross Country Ski Area	1 in parking lot across from college on Al Tahoe Blvd and into the meadow area that runs the length of the ski area.
Camp Richardson Resort	1 at ski rental store, 1 at general market, 1 at beach and restaurant area.
Commons Beach	1 in parking lot, beach front, playground, and stairway down from Hwy 28 to beach.
Cove East/Upper Truckee Marsh	1 at the end of Venice Dr., 1 at El Dorado and Bellevue at trail head
Diamond Peak Ski Resort	2 at ski lift lines.
El Dorado Beach/Boat Ramp	1 on bike path at Lakeview Ave along beachfront.
Granlibakken Ski Resort	2 covering lift lines
Heavenly Ski Resort	1 at Gondola line, 1 at Cal Base lift lines, and 1 covering both Stagecoach and Boulder lift lines
Homewood Ski Resort	2 covering lift lines
Incline Village Recreational Center	1 outside entrance to recreational center.
Kahle Community Center and Park	1 outside entrance to recreational area and in playground area.
MS Dixie Entrance (at Zephyr Cove)	2 at ticket window, boarding line, walkway to boats.
North Tahoe Conference Center	2 outside entrance to recreational center.
North Tahoe Regional Park	1 at sled hill, snowmobile rental, bathrooms, parking lot.
Paige Meadows	1 at trail heads and parking area.
South Tahoe Ice Arena	1 at entrance to Ice Arena.
South Tahoe Recreation Center	1 at entrance to recreational center.
South Tahoe Senior Center	1 at entrance to senior center and parking lot.
Spooner Junction Snow Play Area	1 at parking area and bottom of sled hill.
Spooner Lake Cross Country Ski Resort	3 in parking lot and trail heads.
Tahoe City Golf Course	Site not surveyed.
Tahoe Cross Country Ski Area	1 at trail head and picnic table area.
Zephyr Cove Marina/Resort	1 at snowmobile rental and gift shop, 1 along parking lot sidewalk/restrooms/snack shop, 1 around lodge/restaurant.

Pilot Test

NuStats conducted a pilot test on Tuesday, January 22 2008 to assess methodology and data capture results. Data for the pilot test was collected at two sites: South Y Commercial and Heavenly Ski Resort. The pilot test revealed the methodology was sound and the questionnaire captured all data required for modeling purposes. The response rate, interview length, and item non-response were all within expectation. Full documentation of the pilot test results is included in the technical memorandum in Appendix C.

Survey Dates

Data collection was conducted over a 9-day period from February 22 to March 1, 2008. Due to a large snowstorm, only one site was surveyed on Sunday, February 24. Sites to be surveyed each day were scheduled based on their proximity to each other and anticipated activity level on the scheduled survey day. For all but four sites, surveyors were able to meet or exceed the data collection goal. Table 8 identifies the date and time frame when survey activities occurred at commercial locations, and Table 9 shows the dates and times for recreational survey locations.

TABLE 8: COMMERCIAL DATA COLLECTION DAY AND TIME PERIOD

LOCATION	SURVEY DAY	SURVEY DATE	TIME
Bijou/al Tahoe	Wednesday	2/27/2008	11:00am – 1:45pm
Dollar Hill	Monday	2/25/2008	2:15pm – 4:00pm
Homewood Commercial	Saturday	2/23/2008	10:25am – 11:00am
Incline Village Commercial	Monday	2/25/2008	9:45am - 12:15pm, 12:40pm – 2:40pm
Kings Beach Commercial	Monday	2/25/2008	10:30am – 3:00pm, 3:30pm – 4:30pm
Kingsbury Community Plan	Thursday	2/28/2008	9:00am - 12:30pm
Meyers	Friday	2/22/2008	9:45am - 12:15pm
North Casinos	Tuesday	2/26/2008	1:00pm – 4:10pm
North Casinos	Saturday	3/1/2008	9:30am – 11:30am
North Stateline Non Casino	Tuesday	2/26/2008	10:00am - 1:00pm
Round Hill Community Plan	Thursday	2/28/2008	9:10am - 1:10pm
Sierra Tract	Friday	2/22/2008	9:30am - 12:30pm, 3:20pm – 4:20pm
Ski Run	Thursday	2/28/2008	8:45am - 12:30pm, 1:30pm – 3:15pm
South Stateline	Sunday	2/24/2008	10:00am - 2:00pm
South Y Commercial	Tuesday	1/22/2008	10:15am – 12:00pm, 1:00pm – 5:00pm
Stateline Community Plan	Monday	2/25/2008	4:15pm – 6:00pm
Stateline Community Plan	Wednesday	2/27/2008	3:10pm - 5:00pm
Stateline Community Plan	Thursday	2/28/2008	3:15pm – 4:30pm
Stateline Community Plan	Friday	2/29/2008	8:45am – 10:30am
Sunnyside	Saturday	2/23/2008	11:20am -11:50am
Tahoe City	Friday	2/22/2008	1:00pm - 4:00pm
Tahoe City	Saturday	2/23/2008	1:00pm – 3:00pm
Tahoe City	Monday	2/25/2008	10:30am – 12:30pm
Tahoe Vista Commercial	Monday	2/25/2008	2:30pm - 4:00pm
Tahoma Commercial	Saturday	2/23/2008	10:15am - 10:45am

TABLE 9: RECREATIONAL DATA COLLECTION DAY AND TIME PERIOD

LOCATION	SURVEY DAY	SURVEY DATE	TIME
Alpine Meadows (Backside)	Tuesday	2/25/2008	11:30am – 2:10pm
Bijou Cross Country Ski Area	Thursday	2/28/2008	2:25pm – 3:00pm
Bijou Cross Country Ski Area	Friday	2/29/2008	12:00pm – 4:00pm
Bijou Cross Country Ski Area	Saturday	3/1/2008	3:00pm – 4:00pm
Camp Richardson Resort	Friday	2/29/2008	9:30am - 12:00pm
Commons Beach	Monday	2/25/2008	10:45am - 12:30pm, 1:45pm – 3:45pm
Commons Beach	Saturday	3/1/2008	10:00am – 12:30pm
Cove East/Upper Truckee Marsh	Thursday	2/28/2008	3:30pm – 4:00pm
Cove East/Upper Truckee Marsh	Friday	2/29/2008	9:25am – 12:00pm, 12:30pm – 3:45pm
Cove East/Upper Truckee Marsh	Saturday	3/1/2008	2:45pm – 3:00pm
Diamond Peak Ski Resort	Tuesday	2/26/2008	9:30am – 4:00pm
Diamond Peak Ski Resort	Saturday	3/1/2008	9:50am – 11:15am
El Dorado Beach/Boat Ramp	Wednesday	2/27/2008	9:15am – 11:00am, 12:30pm – 1:45pm
Granlibakken Ski Resort	Friday	2/22/2008	10:15am - 11:45am, 1:15pm – 3:00pm
Heavenly Ski Resort	Tuesday	1/22/2008	9:30am – 12:00pm, 1:00pm – 4:00pm
Heavenly Ski Resort	Saturday	2/23/2008	9:00am - 11:30am
Homewood Ski Resort	Saturday	2/23/2008	10:00am - 12:00pm, 12:30pm – 2:30pm
Incline Village Recreational Center	Monday	2/25/2008	10:00am – 12:30pm, 2:45pm – 3:00pm
Kahle Community Center and Park	Thursday	2/28/2008	1:00pm - 4:45pm
MS Dixie Entrance (at Zephyr Cove)	Friday	2/22/2008	9:10am – 4:35pm
MS Dixie Entrance (at Zephyr Cove)	Wednesday	2/27/2008	2:15pm – 3:30pm
North Tahoe Conference Center	Friday	2/22/2008	9:45am – 11:30pm
North Tahoe Regional Park	Tuesday	2/26/2008	10:00am - 12:30pm, 1:30pm – 4:00pm
North Tahoe Regional Park	Saturday	3/1/2008	9:30am – 1:00pm
Paige Meadows	Saturday	2/23/2008	1:30pm - 1:45pm
Paige Meadows	Monday	2/25/2008	11:00am – 12:15pm, 1:50pm – 3:30pm
Paige Meadows	Saturday	3/1/2008	10:30am – 1:30pm
South Tahoe Ice Arena	Wednesday	2/27/2008	9:00am – 12:00pm
South Tahoe Ice Arena	Friday	2/29/2008	10:45am – 12:45pm
South Tahoe Recreation Center	Wednesday	2/27/2008	9:00am – 11:30am
South Tahoe Senior Center	Wednesday	2/27/2008	11:15am – 3:05pm
Spooner Junction Snow Play Area	Friday	2/29/2008	1:45pm - 2:30pm, 2:45pm – 3:45pm
Spooner Lake Cross Country Ski Resort	Thursday	2/28/2008	2:00pm – 4:00pm
Spooner Lake Cross Country Ski Resort	Friday	2/29/2008	1:45pm - 2:30pm
Tahoe Cross Country Ski Area	Tuesday	2/26/2008	10:10am - 11:50am, 1:50pm – 2:50pm
Zephyr Cove Marina/Resort	Friday	2/22/2008	9:15am – 4:30pm
Zephyr Cove Marina/Resort	Saturday	2/23/2008	11:35am – 12:55pm
Zephyr Cove Marina/Resort	Wednesday	2/27/2008	2:15pm – 3:00pm

SURVEY INSTRUMENT

The survey instrument was designed as an intercept instrument with respondent provided data recorded verbatim by interviewers. The questionnaire consisted of 20 primarily self-coded questions. The questionnaire was designed to obtain information in three major categories: residential status, travel patterns, and respondent demographics. A copy of the questionnaire is in Appendix A. Unweighted data frequencies for non-locational data elements are presented in Appendix B. As noted in Table 10, some of the required data elements were captured by means other than as a question on the questionnaire. This approach had multiple benefits: (1) the questionnaire was shorter to enhance response, and (2) data quality was improved by circumventing respondent-provided information.

TABLE 10: DATA ELEMENTS AND CAPTURE METHODOLOGY

DATA ELEMENT	CAPTURE METHOD
Survey Date	Control file
Survey Day	Control file
Data Collection Time	Control file
Survey Location	Control file
Full Time Resident	Respondent reported
Seasonal Resident	Respondent reported
Visitor	Respondent reported
Overnight Stay	Respondent reported
Length of Stay	Respondent reported
Number of Visits	Respondent reported
Housing Type	Respondent reported
Address	Respondent reported
Trip Origin	Respondent reported
Trip Origin Place	Respondent reported
Travel Mode	Respondent reported
Trip Purpose	Respondent reported
Travel Party Size	Respondent reported
Visitor Party Size	Respondent reported
Employment Status	Respondent reported
Age	Respondent reported
Income	Respondent reported
Visitor Spending	Respondent reported
Gender	Visual determination

In-Field Questionnaire Editing

Following data collection, completed questionnaires underwent a cursory field review for editing and correction. This process involved checking that all questions were answered and confirming collection site location was indicated. After each questionnaire was reviewed, a preliminary assessment was made that identified the questionnaire as a complete or non-complete. All questionnaires were sent to NuStats' home office in Austin, Texas, for scanning and verification.

In addition to questionnaire review, the NuStats Field Manager documented each day's activity including preliminary estimation of completed questionnaires, survey day/day, time, staging locations and data collection methodology in an Excel spreadsheet control file.

DATA PROCESSING

Data entry was conducted using scanning technology in order to minimize human error resulting from traditional data entry methods. The scanning process involved scanning batches of approximately 30 questionnaires to produce an image file of the documents. Data results derived from the image files were individually reviewed and verified by comparing the scanned image to the data contained in the data file. Text data (primarily origin and destination address information) were reviewed for the purpose of correcting misspellings and verifying that the scanner correctly read numeric data.

After questionnaires had been scanned and verified, these data were merged with the control file information (survey site, collection day/date/time, etc.) to create a master database. This database was reviewed, edited, and corrected using both manual and automated edit checks. The results of the data processing were linked to the field management system so that an accurate accounting of survey progress and status was maintained.



3. DATA RESULTS

This section provides survey results. Because these interviews were conducted using a choice sample, the results presented represent only those participants who completed an interview. The final data set contains 1,402 complete, usable records.

Where appropriate, the findings show the data in the aggregate as well as by sample type: commercial or recreational. Tables and graphics in this report display row percents unless otherwise indicated.

RESPONDENT CHARACTERISTICS

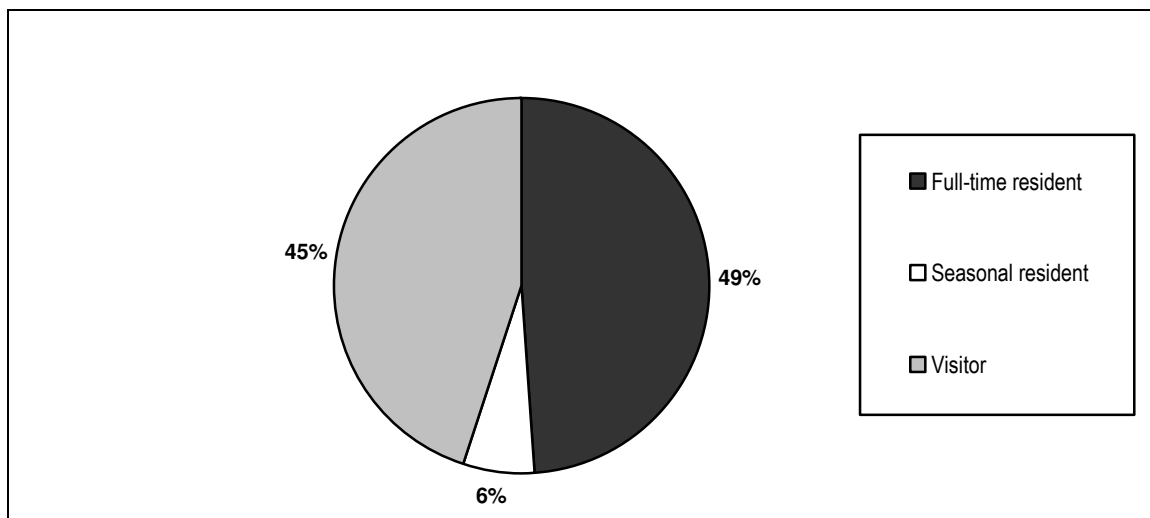
Results presented here under respondent characteristics include both resident and visitor data and demographics. Resident and visitor data figures in the section are in response to questions 1 – 6, 9, and 19 on the survey. Demographic figures are in response to questions 16-18 and 20 on the survey. Cross-tabulation of survey results are presented for specific variables.

RESIDENT AND VISITOR DATA

Figure 1 shows that half of respondents are full-time residents of the Tahoe Basin. Forty-five percent of respondents classified themselves as visitors to the Tahoe Basin at the time of the survey. Only 6% were seasonal residents.

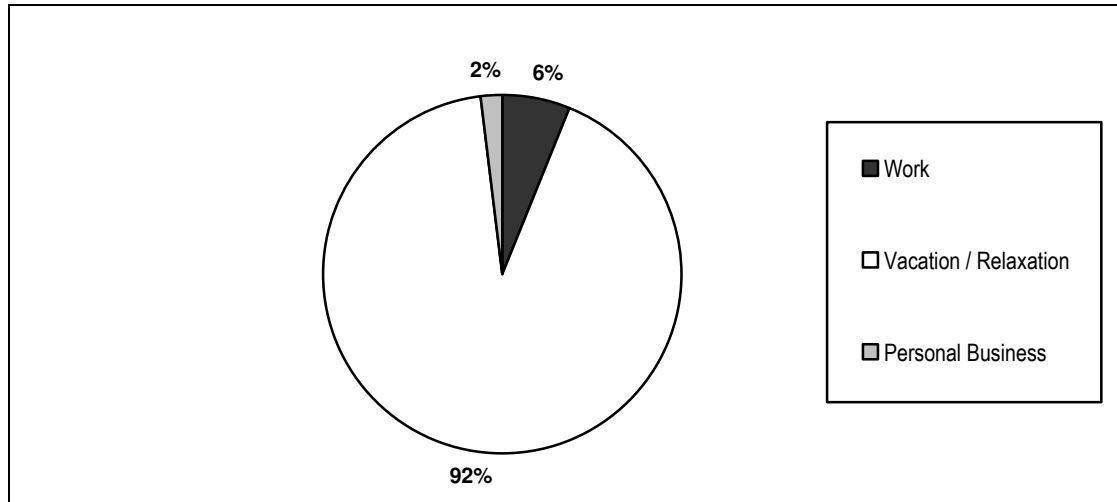
FIGURE 1: RESIDENCE STATUS

(N=1,402)



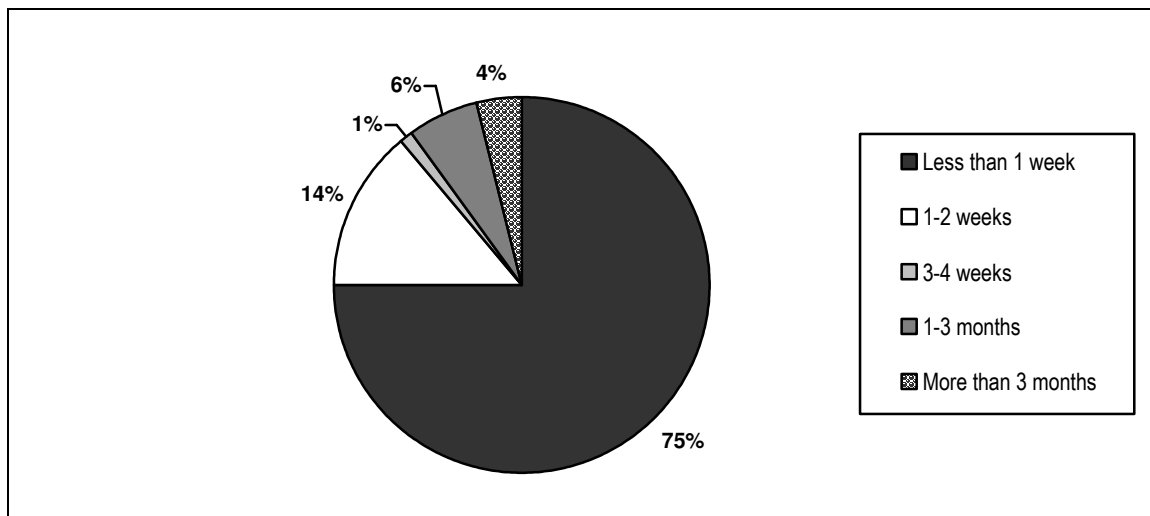
Visitors' primary purpose for visiting Tahoe was overwhelmingly vacation / relaxation. See Figure 2 for further detail.

FIGURE 2: PRIMARY PURPOSE FOR VISIT TO TAHOE
(N=621)



Three-quarters of visitors and seasonal residents interviewed were staying in the area less than a week. Another 14% were staying 1 to 2 weeks. Less than 5% indicated they were staying in the Tahoe region for more than 3 months. See figure 3 for further detail.

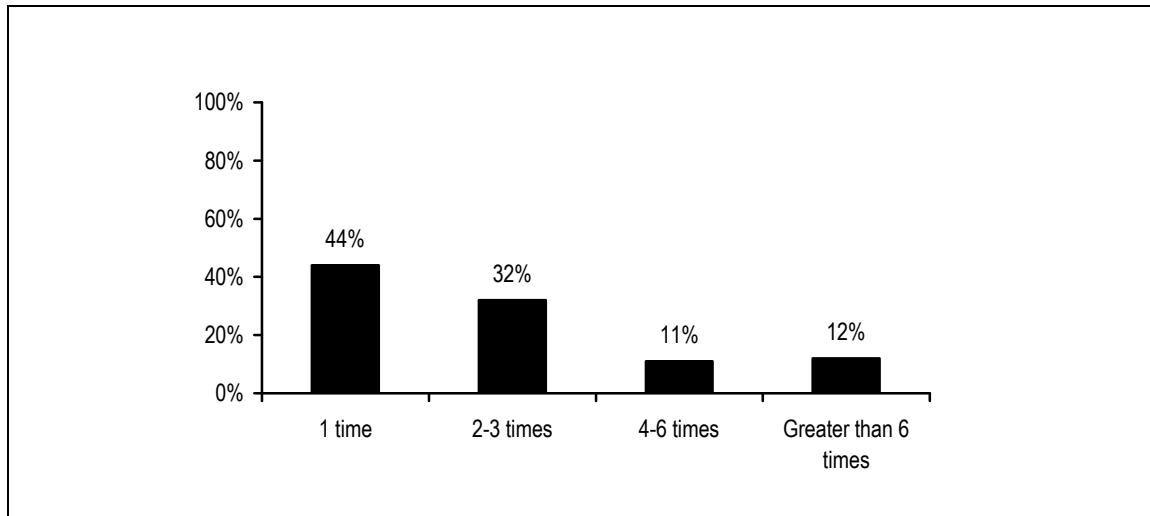
FIGURE 3: LENGTH OF VISIT
(N=699)



More than 40% of visitors and seasonal residents surveyed said they would make only one visit to the Tahoe Basin in 2008, while nearly one-third said they would make two or three trips to the region this year. Figure 4 also shows that another 12% said they will visit Lake Tahoe six or more times this year.

FIGURE 4: NUMBER VISITS TO LAKE TAHOE IN 2008

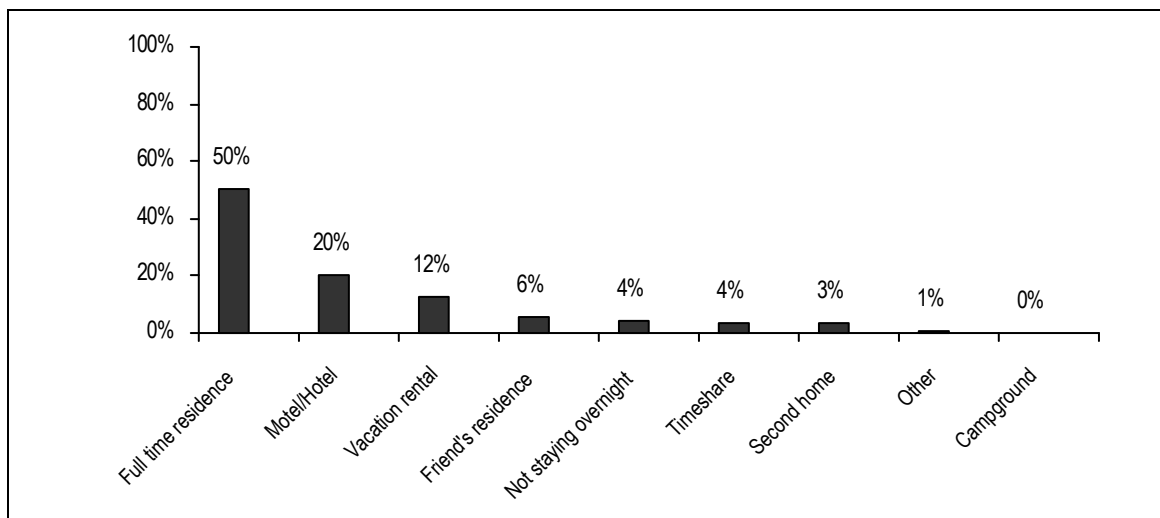
(N=684)



Half of all respondents were staying in (or live in) a full-time residence; 20% reported they were staying in a motel/hotel. See Figure 5 for further detail.

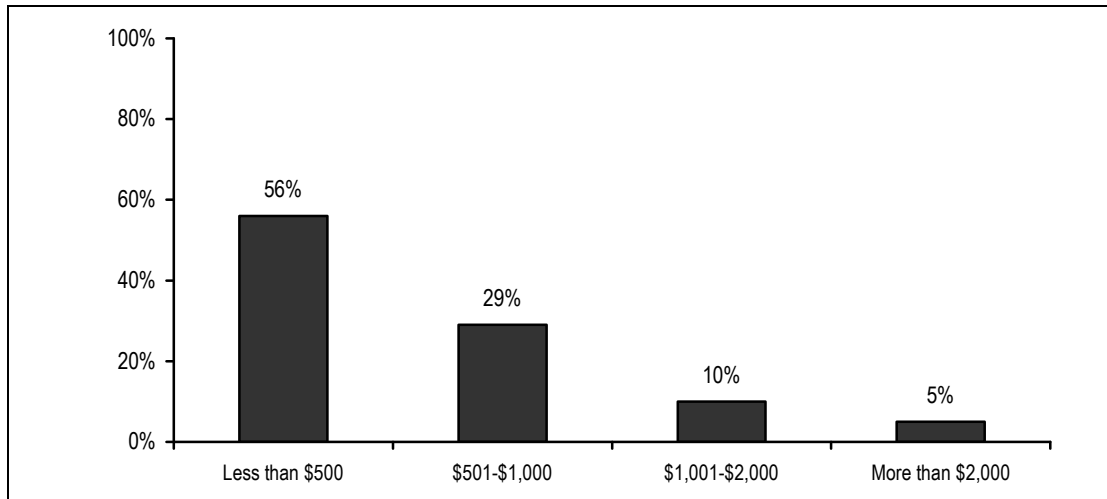
FIGURE 5: TYPE OF LODGING/DWELLING

(N=1,398)



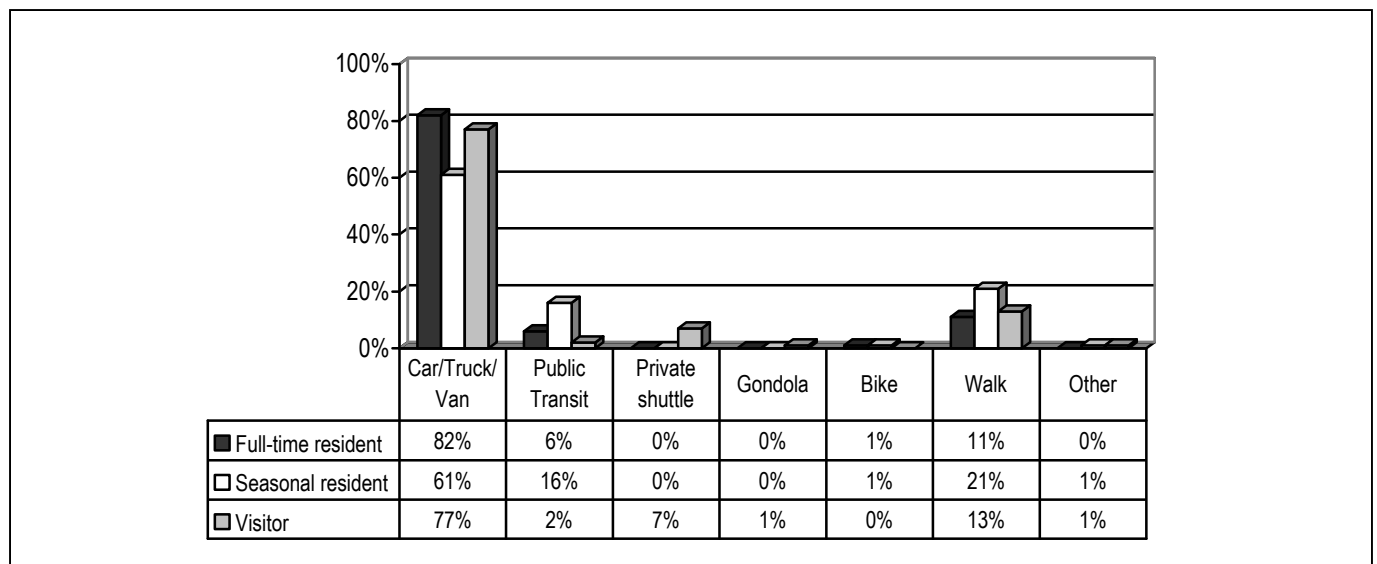
Over half of visitors interviewed reported they would spend less than \$500 on themselves on this trip to the Tahoe Basin. Figure 6 also shows that another 29% reported they would spend between \$501 and \$1,000. Roughly 15% planned to spend more than \$1,000 on this trip.

FIGURE 6: AMOUNT PLAN TO SPEND ON THIS TRIP (VISITORS ONLY)
(N=698)



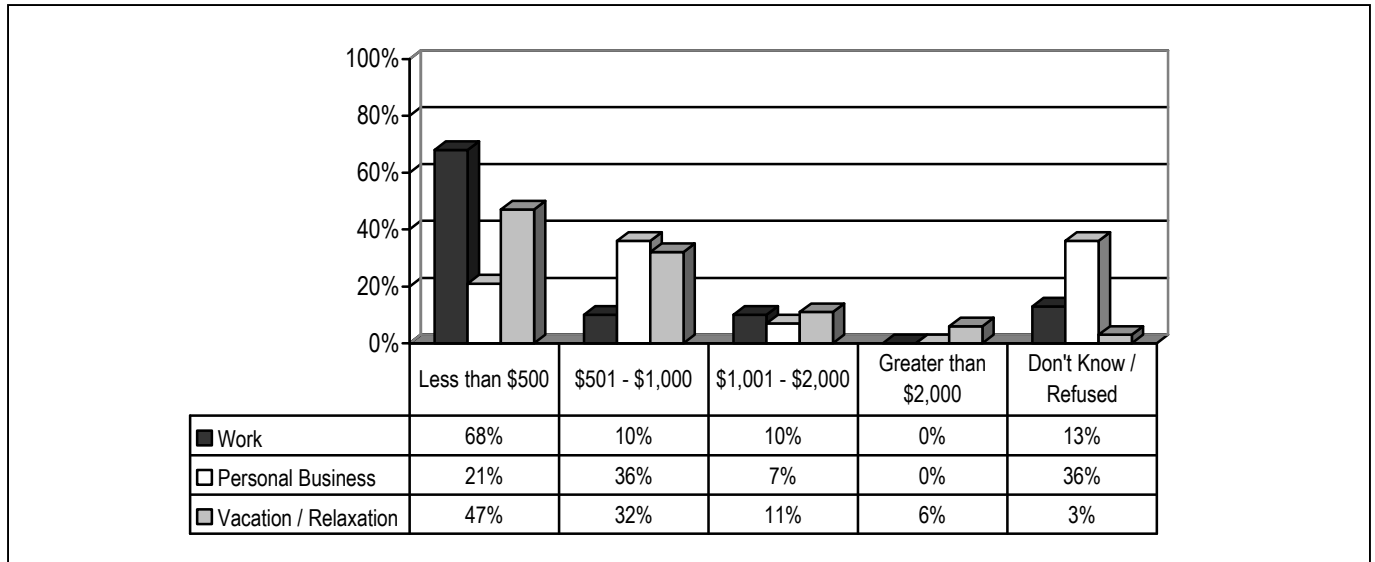
Regardless of residential status, car/truck/van was the primary mode used to get to the location where the respondents were surveyed. This number was somewhat higher for full-time residents and visitors than it was for seasonal residents. Both walking and public transit were used far more by seasonal residents than either full-time residents or visitors. See Figure 7 for further details.

FIGURE 7: TRIP MODE BY RESIDENCE STATUS
(N=1,402)



As one might expect, visitors to the Tahoe Basin who were traveling for vacation / relaxation reported that they planned to spend more money than those traveling for personal business or work. See Figure 8 for details.

FIGURE 8: AMOUNT SPENT BY PURPOSE OF VISIT
(N=621)



DEMOGRAPHICS

Two-thirds of Tahoe residents surveyed reported that they are employed full-time. An additional 15% are employed part-time and 12% are retired. Very few respondents are unemployed. Of those employed either full or part time, nearly one-quarter of respondents work in the service industry (non-casino, hotel/motel/restaurant). Recreation, Professional Services, and Retail were the second, third, and fourth highest responses respectively. See Figures 9 and 10 for further detail.

FIGURE 9: EMPLOYMENT STATUS
(N=733)

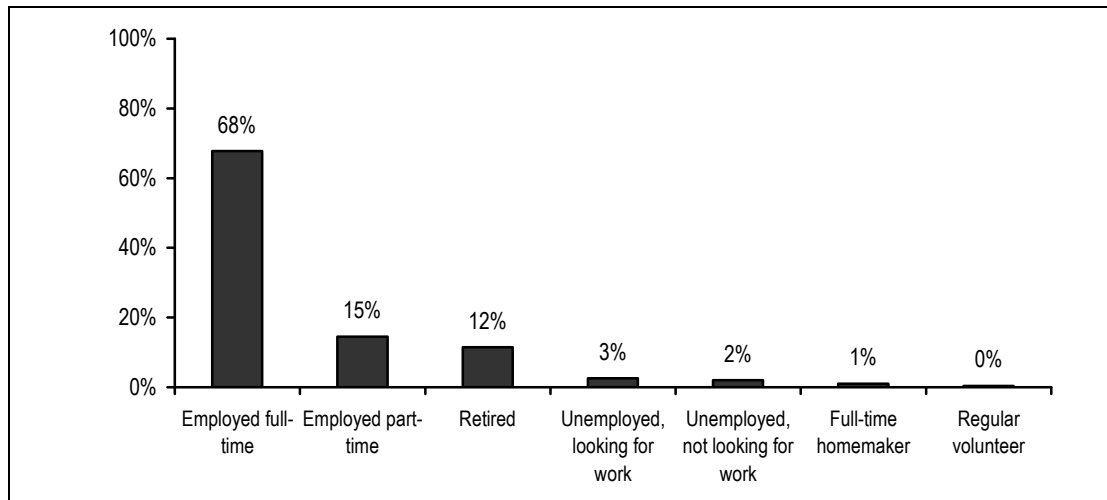
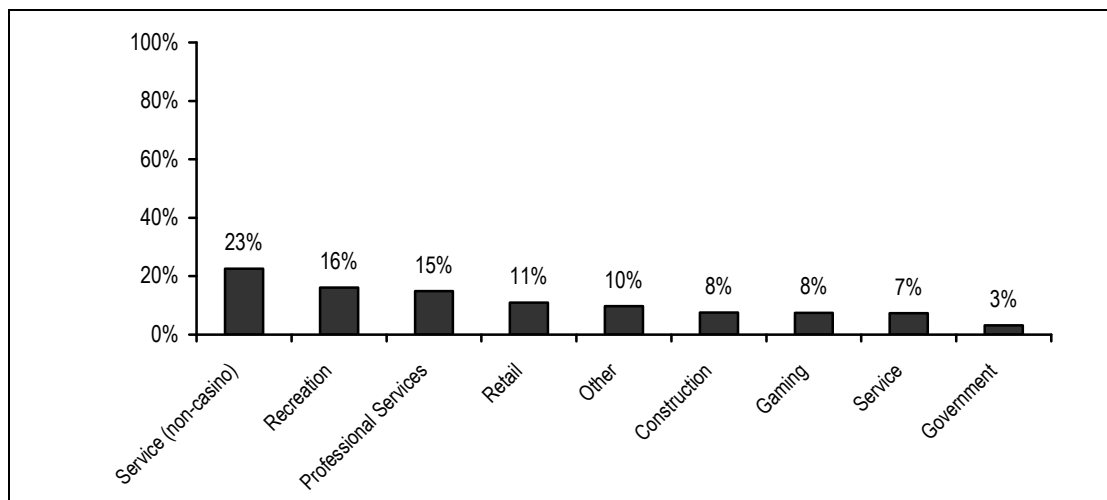


FIGURE 10: EMPLOYMENT TYPE
(N=616)



Over half of respondents are between the ages of 25-44. Of those respondents who answered a specific income category, 10% reported a 2007 household income of \$100k - \$149,999k. The second highest category reported was \$35k - \$49,999k. Men represented 60% of those who completed the survey. Figures 11 and 12 provide further detail on the age and household income breakdown.

FIGURE 11: AGE

(N=1,396)

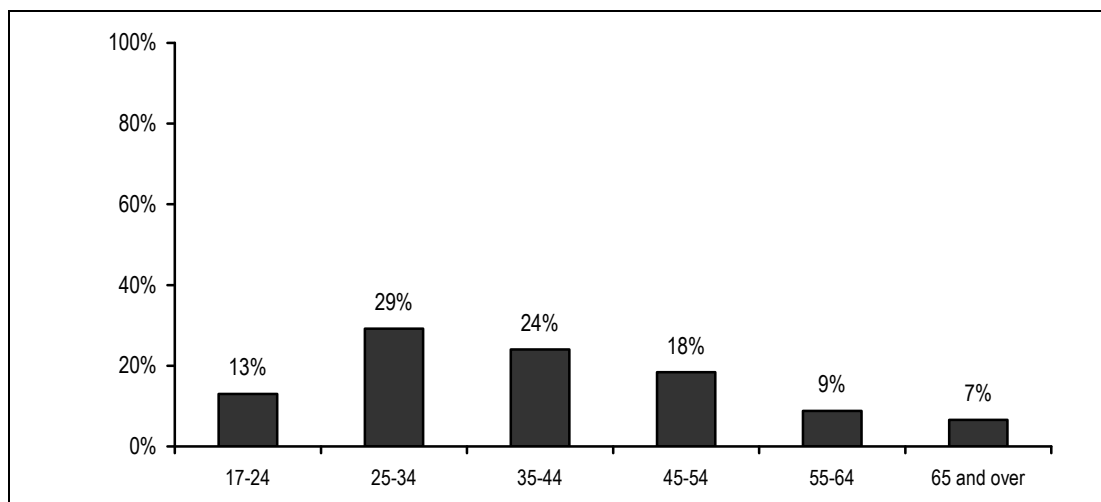
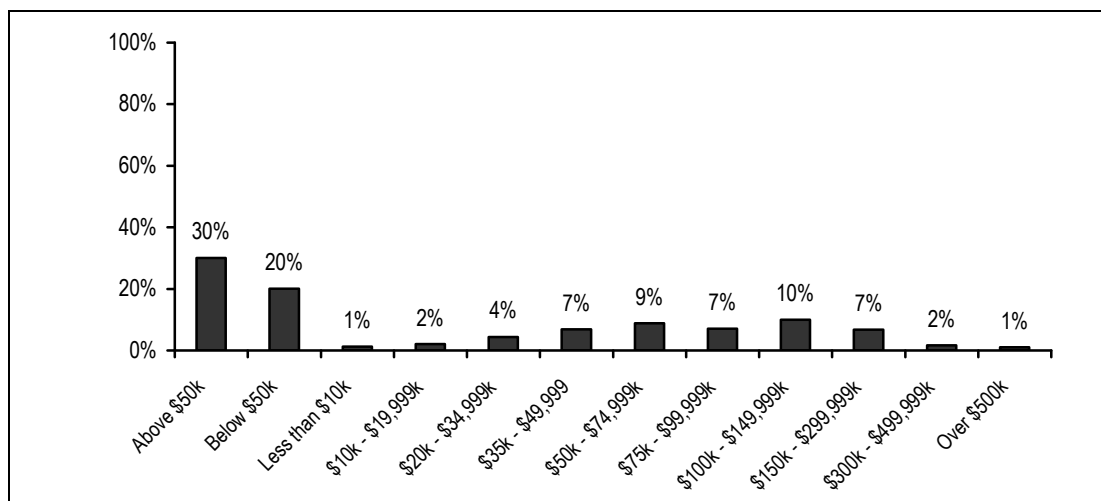


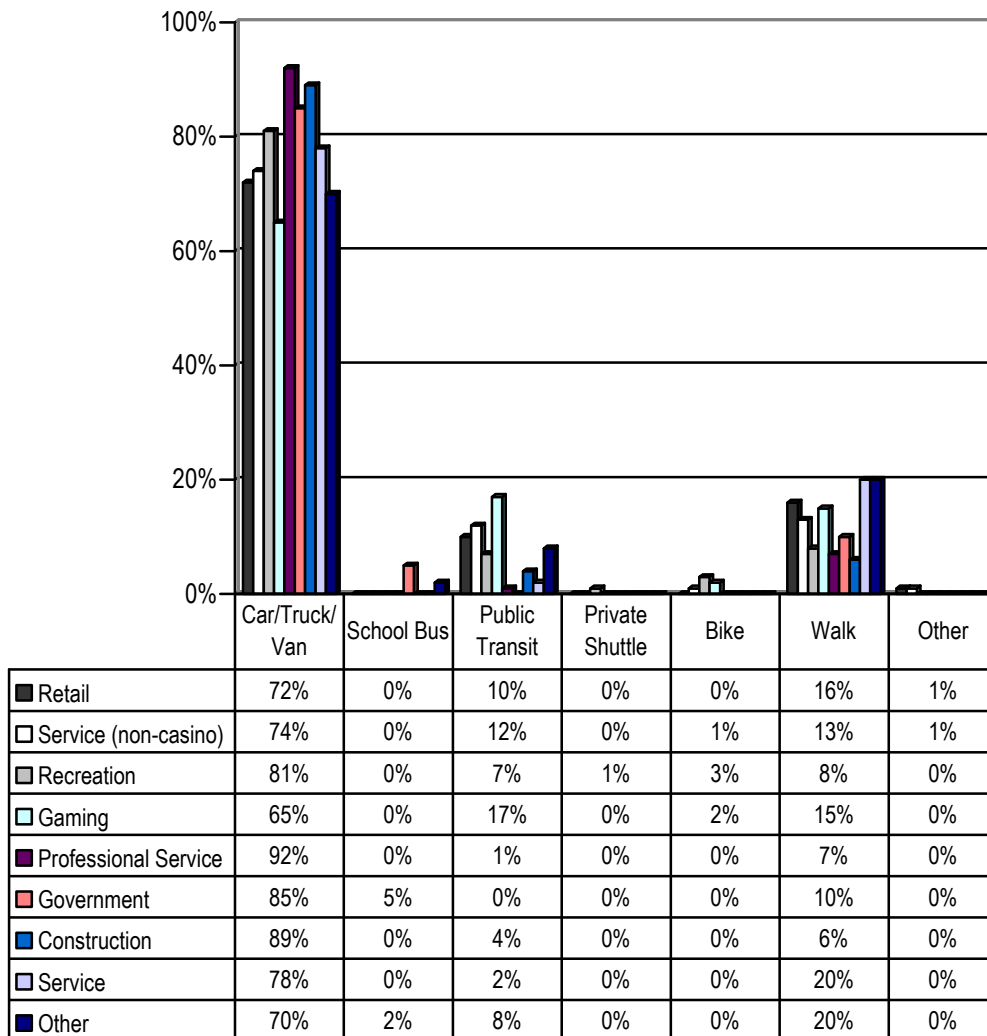
FIGURE 12: HOUSEHOLD INCOME

(N=1,324)



Regardless of occupation, car/truck/van was the primary mode used to get to the location where the respondents were surveyed. This number was highest among those working in professional services and lowest among those employed in gaming. See Figure 13 for further details.

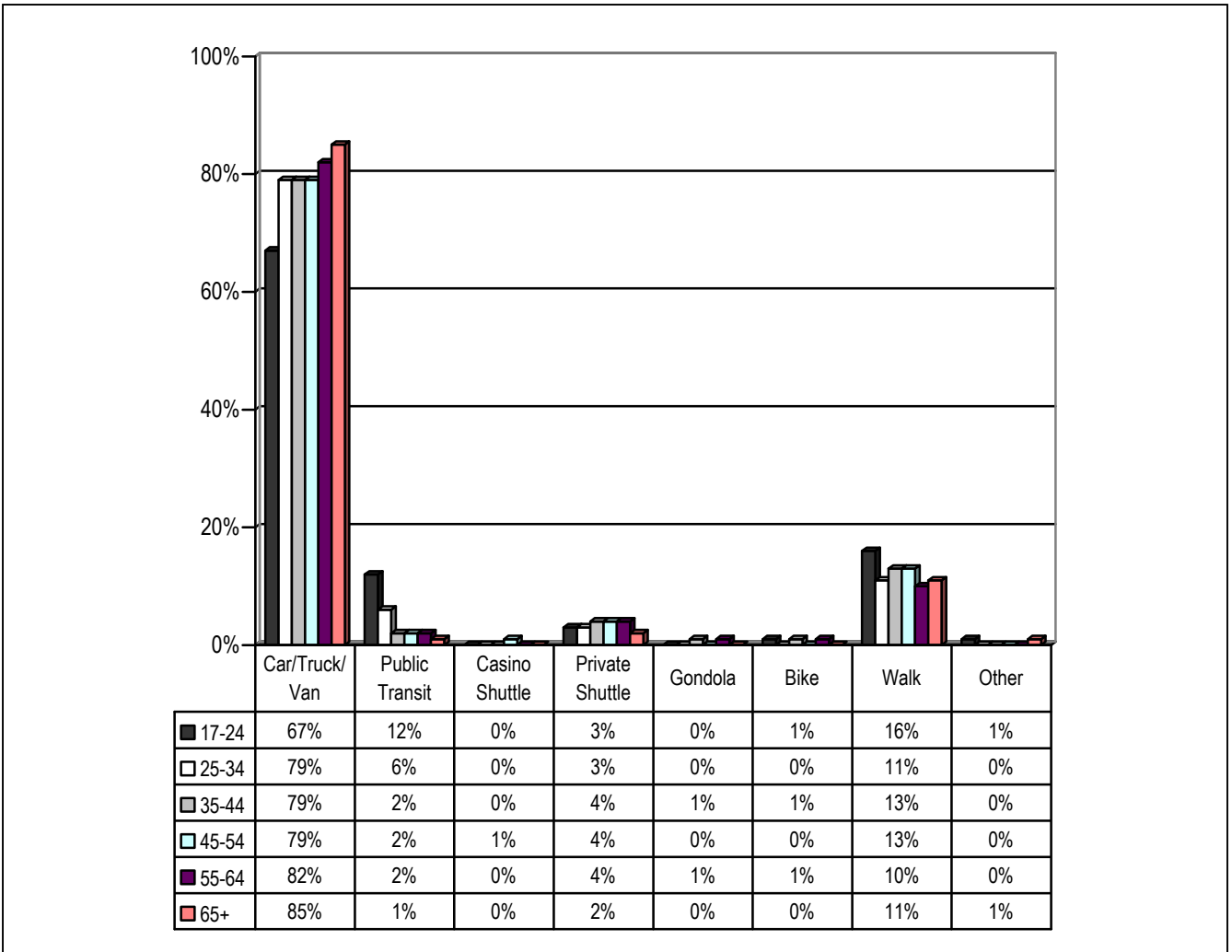
FIGURE 13: TRIP MODE BY OCCUPATION
(N=616)



Comparing trip mode with age, car/truck/van was again the dominant mode of travel to the location where the respondents were surveyed. The higher the age, the more likely a respondent was to have reported car/truck/van as the mode of travel. Public transit use was highest among the 17-24 age category. The same age group was highest in walking. See figure 14 for further detail.

FIGURE 14: TRIP MODE BY AGE

(N=1,396)



Respondents were provided the option of either reporting the total income of all members of their household in 2007 as above or below \$50k or by more specific income categories. Condensing the results into the above or below \$50k income categories reveals that public transit use is far greater among household reporting less than \$50k/year. Car/truck/van use is noticeably higher for households above \$50k/year while walking is nearly even. See Figure 15 for detailed results. Table 11 provides a breakdown of the results by specific income categories.

FIGURE 15: TRIP MODE BY INCOME
(N=1,402)

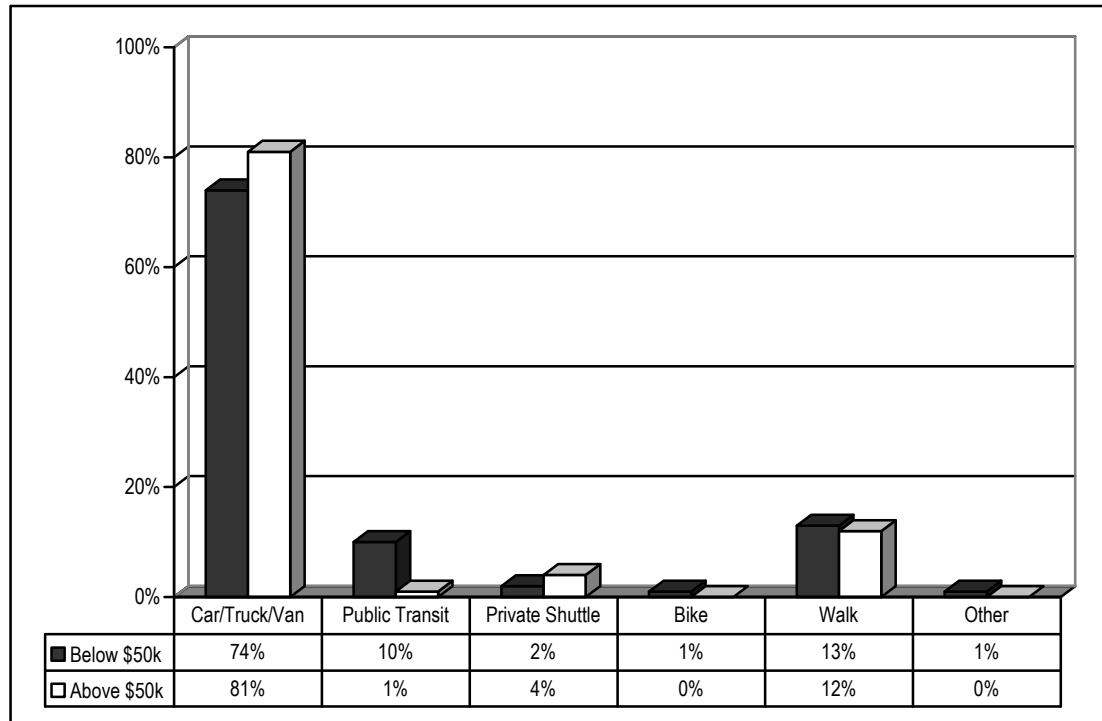


TABLE 11: TRIP MODE BY INCOME
(N=1,402)

	Car / Truck / Van	Public Transit	Casino Shuttle	Private Shuttle	Gondola	Bike	Walk	Other
Above \$50k	81%	2%	0%	4%	1%	0%	12%	0%
Below \$50k	70%	12%	0%	2%	0%	0%	15%	1%
Less than \$10k	81%	6%	0%	6%	0%	0%	6%	0%
\$10k-\$19,999k	61%	11%	0%	0%	0%	4%	21%	4%
\$20k-\$34,999k	78%	10%	0%	0%	0%	2%	10%	0%
\$35k-\$49,999k	88%	4%	0%	1%	0%	0%	7%	0%
\$50k-\$74,999k	80%	2%	0%	2%	0%	3%	13%	1%
\$75k-\$99,999k	86%	3%	0%	3%	0%	0%	7%	0%
\$100k-\$149,999k	79%	1%	0%	7%	0%	0%	13%	1%
\$150k-\$299,999k	78%	0%	1%	9%	0%	0%	12%	0%
\$300k-\$499,999k	86%	0%	0%	5%	0%	0%	9%	0%
Over \$500k	85%	0%	0%	0%	0%	0%	15%	0%

An analysis of trip purpose versus income reveals that half of those earning above \$50k/year were engaging in outdoor recreation activities, compared with only one-quarter of those earning less than \$50k/year. Conversely, nearly one-quarter of those earning less than \$50k/year were traveling to work, compared to 7% of those earning above \$50k/year. Figure 16 provides a comparison of both income classifications and Table 12 displays a more detailed breakdown of income categories.

FIGURE 16: TRIP PURPOSE BY INCOME

(N=1,402)

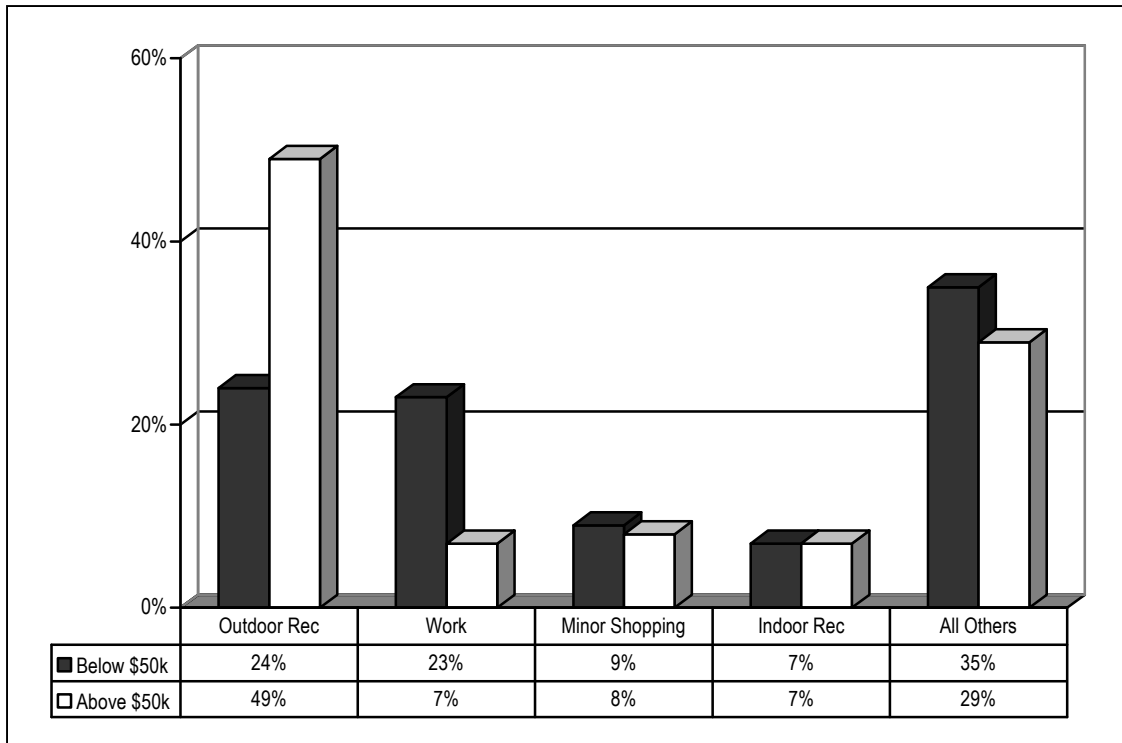


TABLE 12: TRIP PURPOSE BY INCOME

(N=1,402)

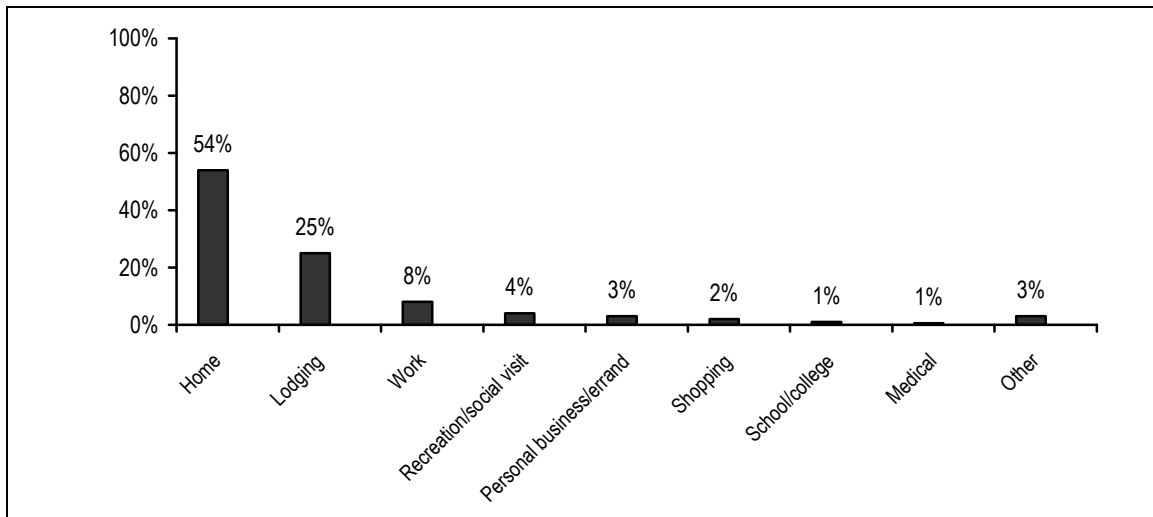
	Outdoor Rec	Work	Minor Shopping	Indoor Rec	All Others
Above \$50k	45%	8%	6%	8%	33%
Below \$50k	24%	26%	6%	9%	34%
Less than \$10k	20%	27%	13%	7%	33%
\$10k-\$19,999k	11%	29%	21%	7%	32%
\$20k-\$34,999k	21%	21%	7%	2%	50%
\$35k-\$49,999k	33%	12%	16%	3%	36%
\$50k-\$74,999k	41%	9%	10%	8%	32%
\$75k-\$99,999k	57%	4%	5%	5%	28%
\$100k-\$149,999k	58%	8%	10%	6%	19%
\$150k-\$299,999k	59%	3%	10%	2%	26%
\$300k-\$499,999k	55%	0%	14%	0%	32%
Over \$500k	31%	0%	23%	15%	31%

TRIP CHARACTERISTICS

Trip characteristics presented here are in response to questions 8, 11, 14, and 15 on the survey. With regards to trip origin, slightly over three-quarters of trips originated from a residence (54% home and 25% lodging). See Figure 17 for further details.

FIGURE 17: TRIP ORIGIN

(N=1,402)



As shown in the table below, trip purpose varied based on residential status. For full-time residents, work was the leading trip purpose, followed closely by outdoor recreation. Seasonal residents reported outdoor recreation as their primary trip purpose, followed by work. For visitors, outdoor recreation was by far the dominant trip purpose at 64%.

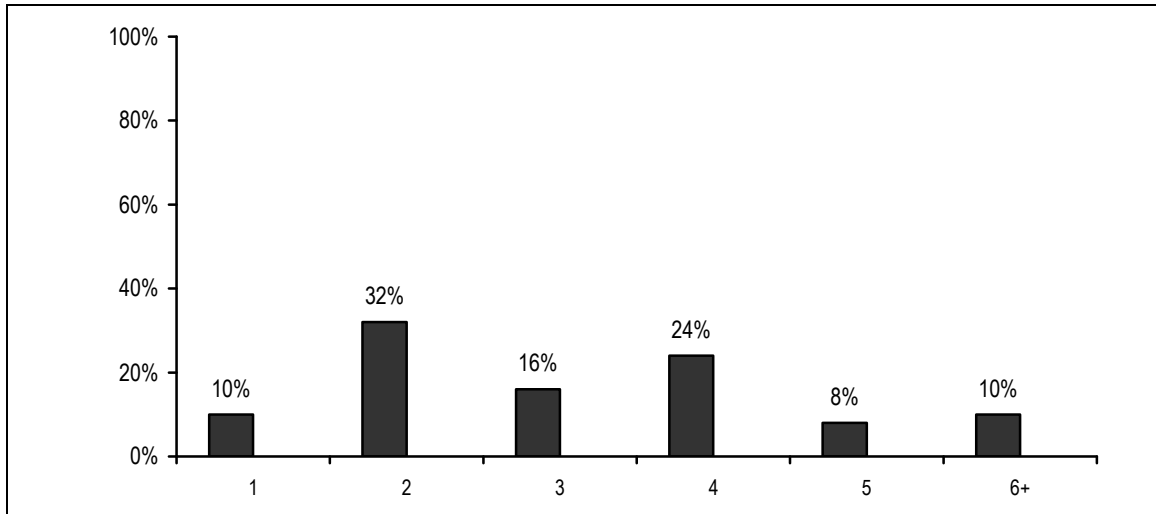
TABLE 13: RESIDENTIAL STATUS BY TRIP PURPOSE

(N=1,402)

	Full-Time Resident	Seasonal Resident	Visitor
At home activities	0%	0%	1%
Work	22%	17%	2%
Work related	6%	2%	3%
Eating/drinking at a restaurant/bar	8%	9%	6%
Minor shopping	9%	11%	7%
Quick stops	7%	7%	2%
Medical	1%	1%	0%
Personal business	6%	11%	0%
Outdoor recreation	21%	27%	64%
Indoor recreation	11%	6%	1%
Entertainment	1%	0%	1%
Casino gaming	1%	2%	5%
Visiting friends or relatives	1%	2%	1%
Picking up someone	1%	0%	0%
Loop Trip	2%	4%	3%
Other, specify	4%	0%	5%

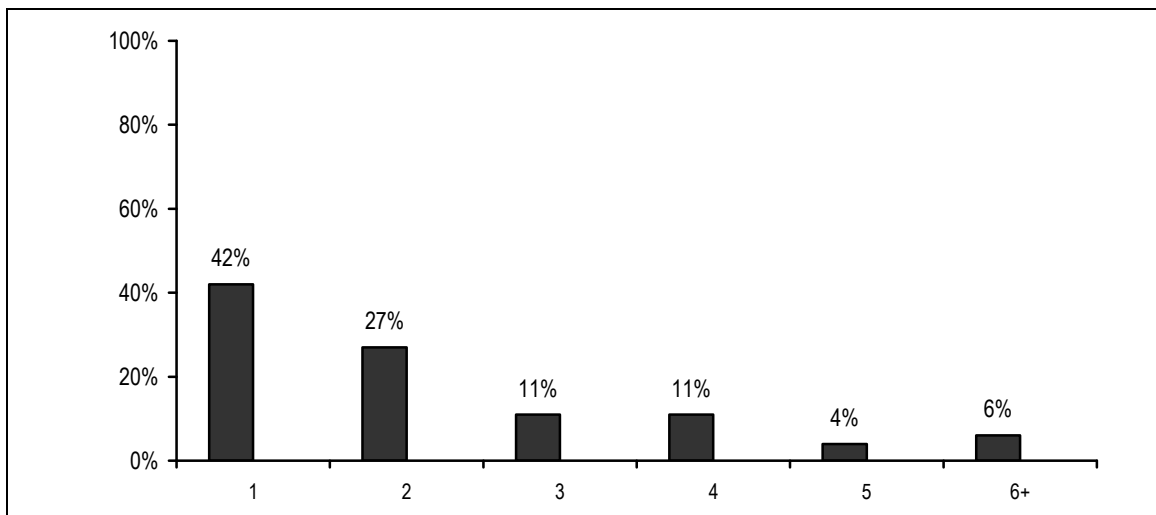
For visitors and seasonal residents traveling to the Tahoe Basin by private vehicle, nearly one-third of the vehicles contained the driver and one passenger. Roughly one-quarter contained the driver and three additional passengers. See Figure 18 for further details.

FIGURE 18: TRAVELING PARTY SIZE – ENTERING THE TAHOE BASIN
(N=1,353)



Over three-quarters of respondents reported trips to survey locations were with two or less in the immediate party. Both party sizes of 3 and 4 each represented 11% of the responses to question 15. See figure 19 for further detail.

FIGURE 19: TRAVELING PARTY SIZE – TRIPS WITHIN TAHOE BASIN
(N=1,372)

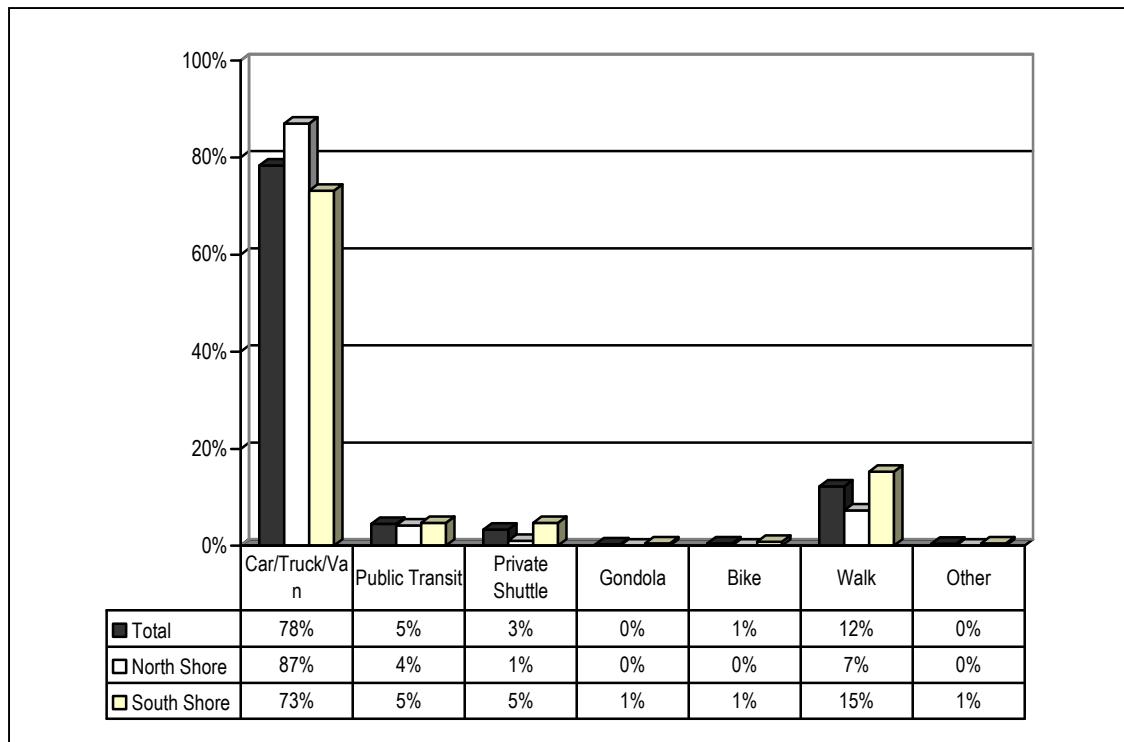


MODE SHARE RESULTS

The mode share results presented here are in response to question 13 on the survey. Overall, car/truck/van was the dominant mode used to get to the survey site. Auto use was higher on the north shore than on the south shore. Another noticeable difference between shores was walking. Fifteen percent of south shore respondents walked to get to the survey site, compared with only 7% of north shore respondents. Transit use was virtually the same on both shores. See Figure 20 for further details.

FIGURE 20: MODE TO LOCATION BY TOTAL AND SHORE SURVEYED

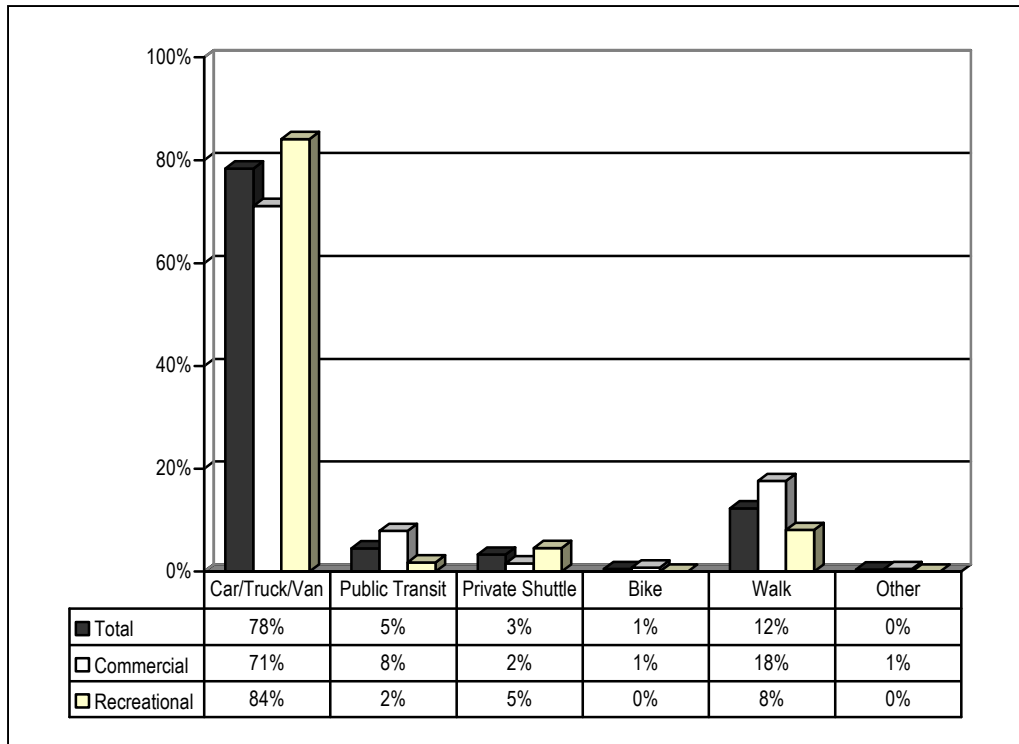
(N=1,402)



Viewing the mode share results by that the sample type reveals car/truck/van mode is significantly higher for those surveyed at recreational sites than commercial sites. As a result, both walking and public transit use is higher among those surveyed at commercial sites. See Figure 21 for further details.

FIGURE 21: MODE TO LOCATION BY TOTAL AND SAMPLE TYPE

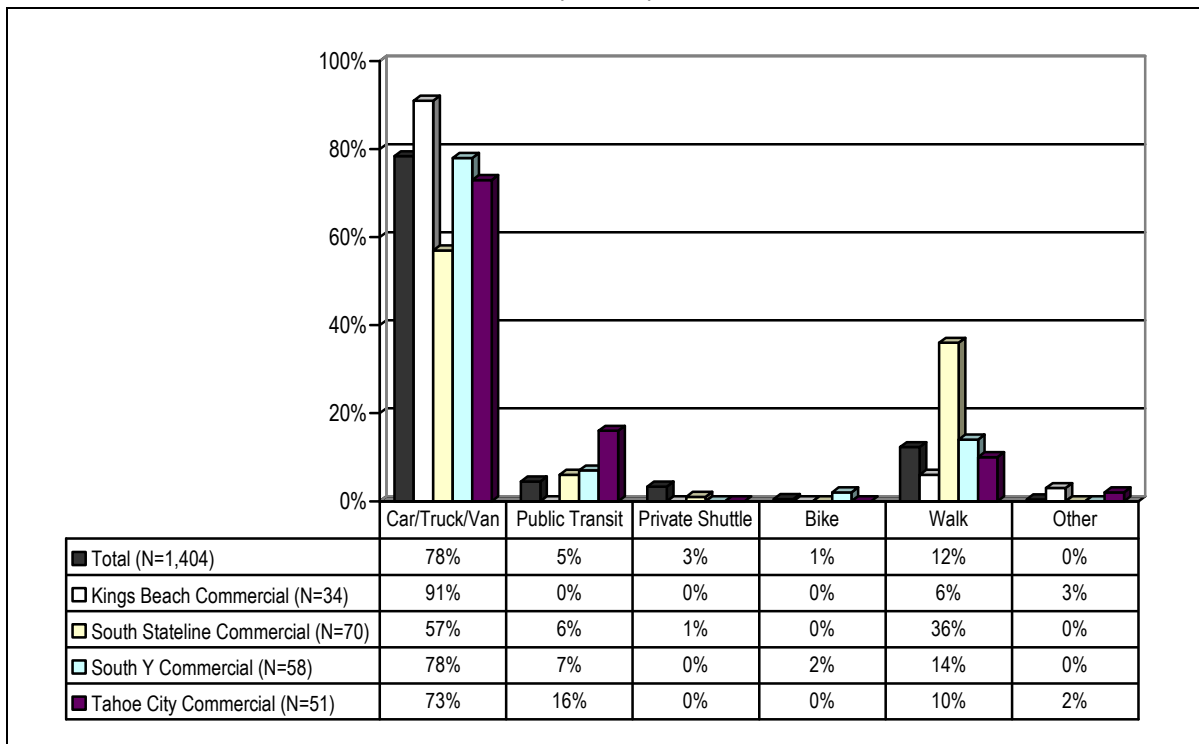
(N=1,402)



Looking at the mode share results for a select few of the commercial sites shows a drastic difference in the mode share breakdown. While car/truck/van is the primary mode for all sites, the dominance of this mode varies. At Kings Beach on the north shore, over 90% of respondents use a car/truck/van and nobody reported using public transit. Walking and other modes rounded out the results. On the south shore at South Stateline, car/truck/van represented only slightly over half of respondents travel mode, while walking accounted for a little over one-third of responses. South Y on the south shore and Tahoe City on the north shore reported similar results for car/truck/van. The difference between those two sites was higher public transit use reported in Tahoe City and higher walking reported at South Y. See Figure 22 for further details.

FIGURE 22: MODE TO LOCATION BY TOTAL AND SPECIFIC SITES

(N=1,402)



GEOCODED DATA COLLECTION RESULTS

All of the address information obtained on the completed surveys during data collection was geocoded at the TRPA office in Stateline, NV. The following maps (figures 23-25) provided by TRPA represent the number of completed surveys by site type (commercial, recreation, or combined).

FIGURE 23: COMPLETED SURVEYS BY RECREATIONAL LOCATION

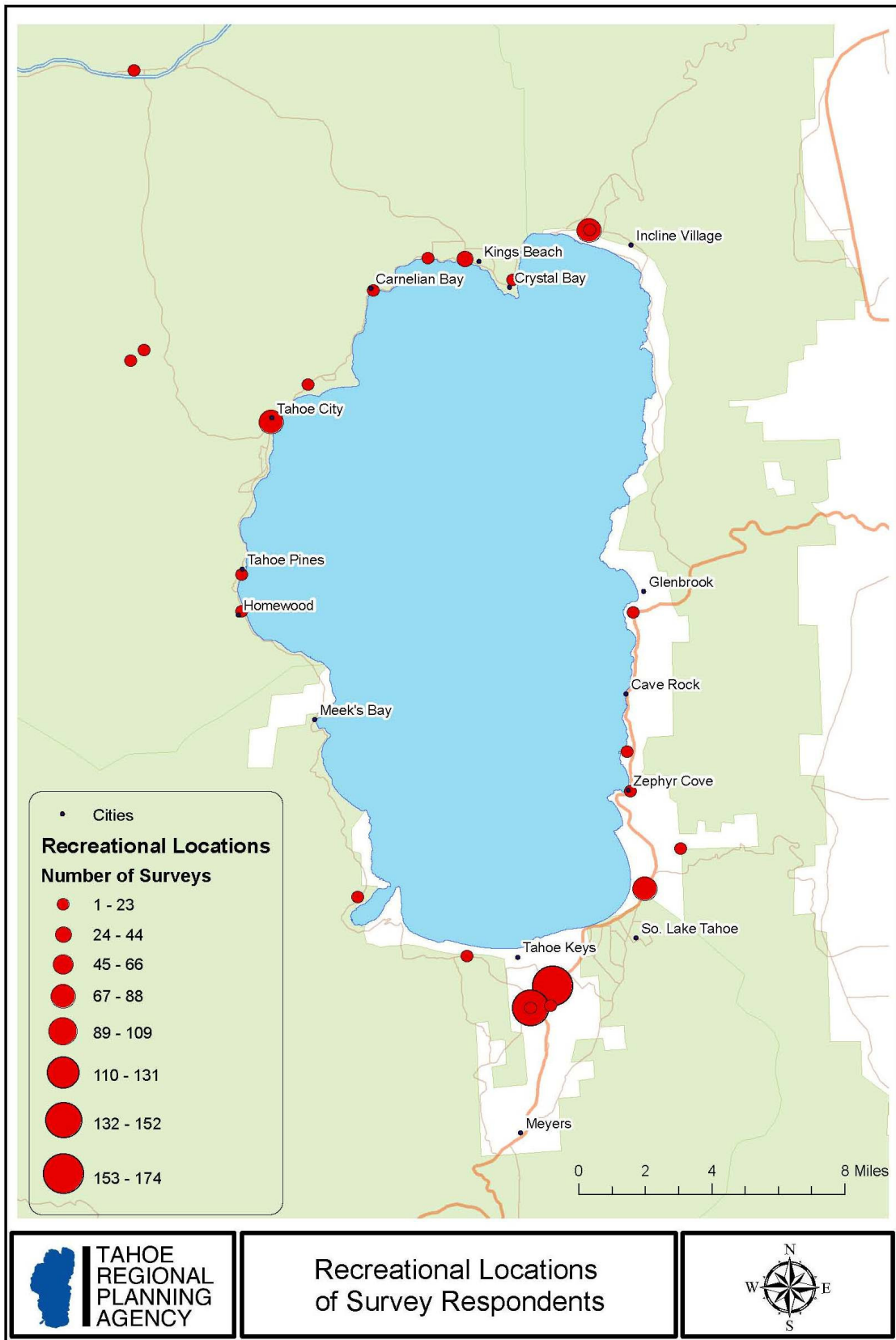
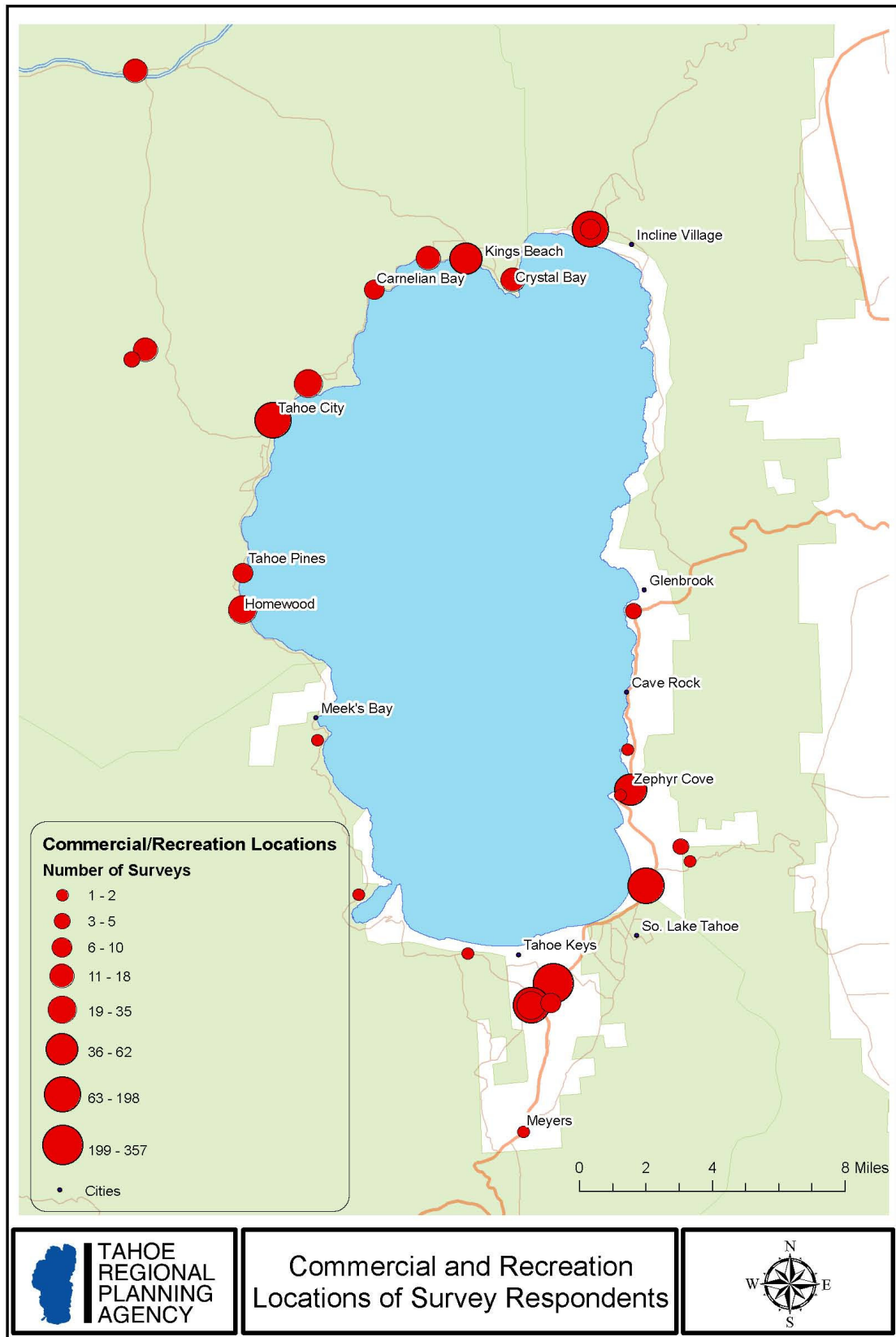


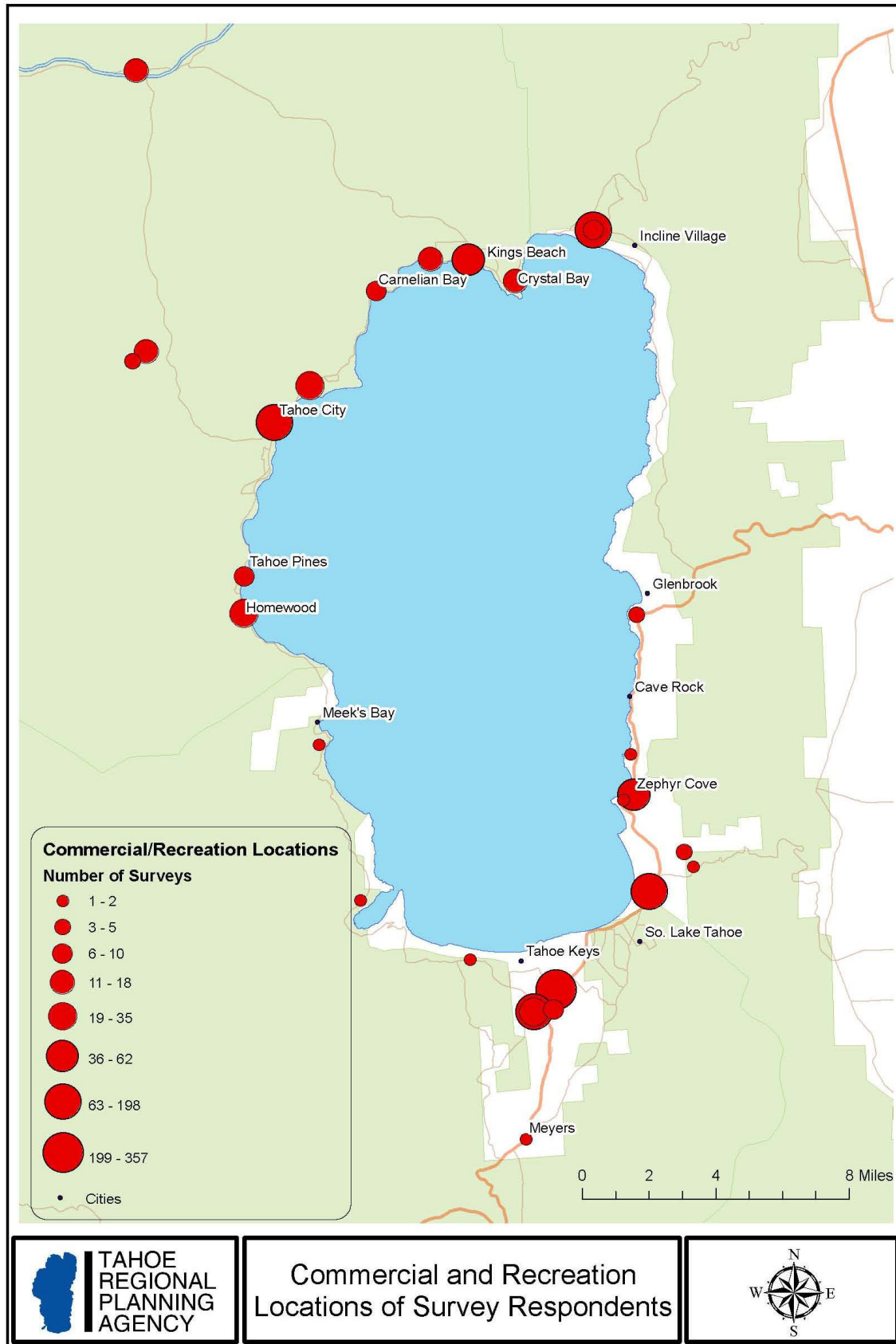
FIGURE 24: COMPLETED SURVEYS BY COMMERCIAL LOCATION



TRPAMAP DISCLAIMER: This map was developed and produced by the TRPA GIS department. It is provided for reference only and is not intended to show map scale accuracy or all inclusive map features. The material on this map was compiled using the most current data available, but the data is dynamic and accuracy cannot be guaranteed.

Date: 4/22/2008

FIGURE 25: COMPLETED SURVEYS BY RECREATION & COMMERCIAL LOCATIONS



TRPA MAP DISCLAIMER: This map was developed and produced by the TRPA GIS department. It is provided for reference only and is not intended to show map scale accuracy or all inclusive map features. The material on this map was compiled using the most current data available, but the data is dynamic and accuracy cannot be guaranteed.

Date: 4/22/2008



4. MODE SPLIT COMPARISON

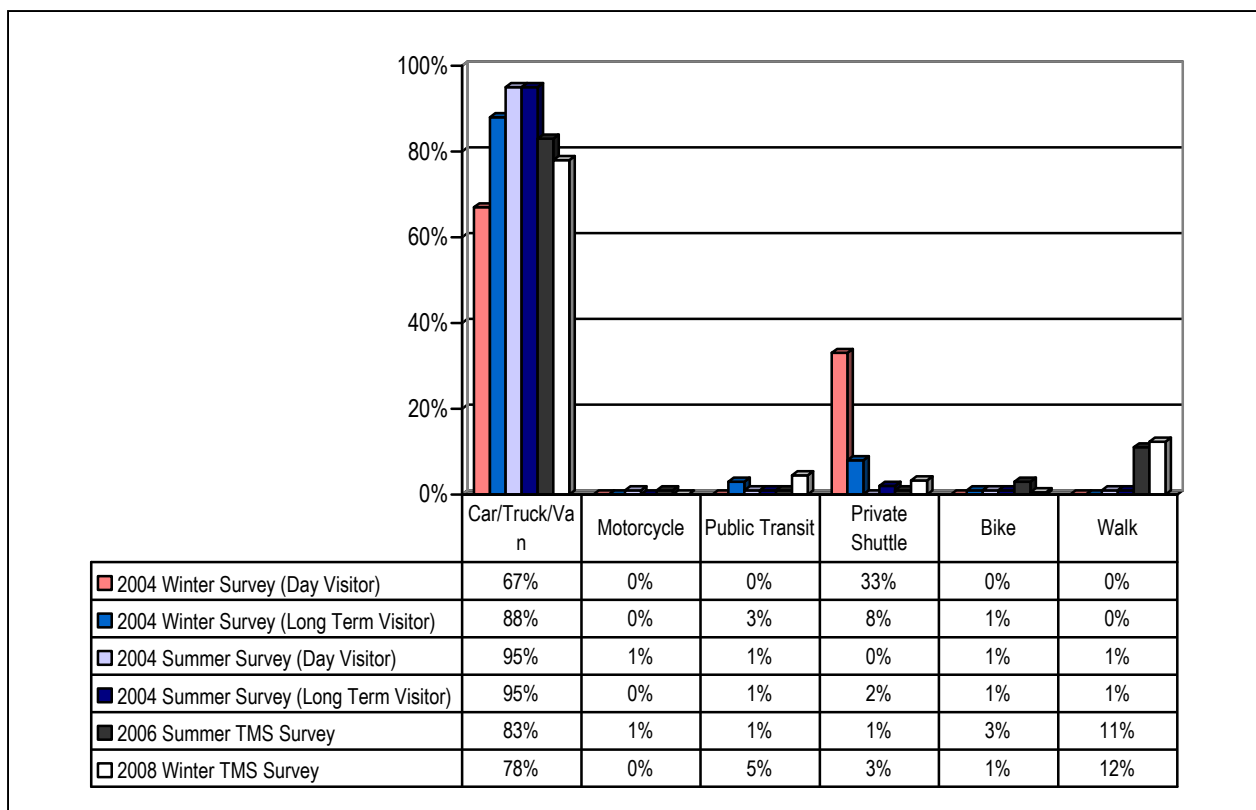
One of the primary goals of the 2008 Winter Travel Mode Share Survey was to identify mode splits at both commercial and residential locations to provide a baseline for comparison over time. Conducting this research effort on an annual or bi-annual basis will provide the data necessary to track changes in mode split, and assess the impact of planning efforts aimed at reducing the use of personal vehicles.

In 2006, NuStats conducted TRPA's first travel mode share survey. In this summer survey, respondents were asked to report their travel mode for the trip to the location at which they were intercepted. Additionally, in 2004 NuStats conducted Winter and Summer Visitor Surveys in which mode split data of visitors to the Tahoe Basin were collected. The recently completed 2008 winter TMS survey followed the same format of the 2006 summer survey with only minor modifications – which allows for a side by side comparison of the results. To a lesser extent, the results of the 2004 surveys can be compared with the 2008 results. A comparison of all surveys is provided here.

As shown in Figure 26, car/truck/van was the dominant mode for all surveys. However, the car/truck/van mode share decreased from the 2006 summer survey to the 2008 winter survey with gains made in public transit use and private shuttle. Due to the seasonal variation of the surveys, fewer respondents used bikes in the winter survey, but walking remained virtually unchanged.

Follow up winter travel mode share surveys will remove any impact seasonal variations have on the results and will provide for a more robust comparison of the impact of planning practices aimed at reducing automobile use throughout the Tahoe Basin.

FIGURE 26: MODE SPLIT COMPARISON
(N=1,402)





APPENDIX A: SURVEY INSTRUMENT

A copy of both the front and backside of the 2008 Winter Mode Share Survey instrument is found on the following pages.

Serial#
2000-3100

May I please conduct the survey with you?

-
- A horizontal number line with 18 tick marks, labeled from 1 to 18.



APPENDIX B: DATA FREQUENCIES

Residence status

		FREQUENCY	PERCENT
Valid	1 Full time resident	691	49.3
	2 Seasonal resident	82	5.8
	3 Visitor	629	44.9
	Total	1402	100.0

Do you consider yourself a full time resident of the Tahoe Region?

		FREQUENCY	PERCENT
Valid	1 Yes	691	49.3
	2 No	711	50.7
	Total	1402	100.0

Do you consider yourself a seasonal resident?

		FREQUENCY	PERCENT
Valid	1 Yes	82	5.8
	2 No	629	44.9
	Total	711	50.7
Missing	System	691	49.3
Total		1402	100.0

What is your primary purpose for visiting the Tahoe Basin?

		FREQUENCY	PERCENT
Valid	1 Work	40	6.4
	2 Personal Business	14	2.3
	3 Vacation/Relaxation	567	90.3
	Total	621	100.0
Missing	9 Don't Know/Refused	8	
	System	773	
	Total	781	
Total		1402	

How many nights will you be staying in the Tahoe Basin?

		FREQUENCY	PERCENT
Valid	1 Less than 1 week	526	75.3
	2 1-2 weeks	98	14.0
	3 3-4 weeks	4	0.6
	4 1-3 months	41	5.9
	5 More than 3 months	30	4.3
	Total	699	100.0
Missing	99 RF	12	
	System	691	
	Total	703	
Total		1402	

How many times in 2008 will you or have you come to Lake Tahoe?

		FREQUENCY	PERCENT
Valid	1 1 time	302	44.2
	2 2-3 times	221	32.3
	3 4-6 times	76	11.1
	4 Greater than 6 times	85	12.4
	Total	684	100.0
Missing	99 Refused	27	
	System	691	
	Total	718	
Total		1402	

What was your primary means of travel to enter the Tahoe Basin?

		FREQUENCY	PERCENT
Valid	Car/Truck/Van (rented, owned, or leased)	632	90.4
	Public Transit	16	2.3
	Casino Shuttle	7	1.0
	Private Shuttle	36	5.2
	Taxi/Limo	3	0.4
	Ferry or Boat	1	0.1
	Walk	2	0.3
	Other, Specify	2	0.3
	Total	699	100.0
Missing	99 Refused	12	
	System	691	
	Total	703	
Total		1402	

If you arrived by private vehicle, how many people, including yourself, traveled in the vehicle?

		FREQUENCY	PERCENT
Valid	One	70	10.5
	Two	214	32.2
	Three	103	15.5
	Four	159	23.9
	Five	55	8.3
	Six or more	63	9.5
	Total	664	100.0
Missing	99 Refused	47	
	System	691	
	Total	738	
Total		1402	

What best describes where you are staying/living in the Tahoe Basin?

		FREQUENCY	PERCENT
	1 Full time residence	702	50.2
	2 Vacation rental	172	12.3
	3 Second home	47	3.4
	4 Friend's residence	78	5.6
	5 Timeshare	50	3.6
	6 Motel/Hotel	281	20.1
	7 Campground (including RV, tents and campers)	2	0.1
	8 Not staying overnight	57	4.1
	97 Other, specify	9	0.6
	Total	1398	100.0
Missing	99 RF	4	
Total		1402	

Where are you coming from?

		FREQUENCY	PERCENT
Valid	0 Home	753	53.7
	1 Lodging	354	25.2
	2 Work	117	8.3
	3 Shopping	31	2.2
	4 School/College	9	0.6
	5 Recreation/social visit	55	3.9
	6 Personal business/errand	40	2.9
	7 Medical	8	0.6
	97 Other	35	2.5
Total		1402	100.0

What was your primary means of transportation to get to this place (first selection)?

		FREQUENCY	PERCENT
Valid	1 Car/Truck/Van (rented, owned, or leased)	1099	78.4
	2 Motorcycle/Moped	0	0.0
	3 School Bus	2	0.1
	4 Public Transit	63	4.5
	5 Para Transit	0	0.0
	6 Casino Shuttle	2	0.1
	7 Private Shuttle	46	3.3
	8 Taxi/Limo	1	0.1
	9 Gondola	4	0.3
	10 Ferry or Boat	0	0.0
	11 Bike	7	0.5
	12 Walk	172	12.3
	97 Other, specify	6	0.4
	Total	1402	100.0

What was your primary means of transportation to get to this place (second selection)?

		FREQUENCY	PERCENT
Valid	1 Car/Truck/Van (rented, owned, or leased)	26	21.1
	2 Motorcycle/Moped	1	0.8
	3 School Bus	3	2.4
	4 Public Transit	28	22.8
	5 Para Transit	2	1.6
	6 Casino Shuttle	3	2.4
	7 Private Shuttle	3	2.4
	8 Taxi/Limo	2	1.6
	9. Gondola	2	1.6
	10 Ferry or Boat	3	2.4
	11 Bike	10	8.1
	12 Walk	40	32.5
	97 Other, specify	0	0.0
	Total	123	100.0
	Missing	1279	
	Total	1402	

What was your primary means of transportation to get to this place (third selection)?

		FREQUENCY	PERCENT
Valid	1 Car/Truck/Van (rented, owned, or leased)	1	25.0
	12 Walk	1	25.0
	97 Other, specify	2	50.0
	Total	4	100.0
	Missing	1398	
	Total	1402	

What is the primary purpose of this specific trip to this location?

		FREQUENCY	PERCENT
Valid	1 At home activities (sleeping, watching TV, eating, personal)	5	0.4
	2 At home - work related	3	0.2
	3 Work	173	12.4
	4 Work related	65	4.7
	5 Eating/drinking at restaurant/bar	96	6.9
	6 Minor shopping (grocery/souvenir shopping, frequently/weekly)	117	8.4
	7 Major shopping (Costco, appliance, car, on occasion)	1	0.1
	8 Quick stop (coffee, gas, etc.)	65	4.7
	9 Medical	6	0.4
	10 Personal business (bank, pay bill, etc.)	49	3.5
	11 Outdoor recreation (skiing, hiking, snowmobiling, etc.)	569	40.7
	12 Indoor recreation (bowling, ice skating, etc.)	90	6.4
	13 Entertainment (movie, sports event, show, etc.)	9	0.6
	14 Casino gaming	36	2.6
	15 Visiting friends or relatives	13	0.9
	16 Religious	0	0.0
	17 Community/political meeting	0	0.0
	18 School	0	0.0
	19 Picking up someone	8	0.6
	20 Dropping off someone	0	0.0
	21 Loop trip (walking dog around block, etc.)	31	2.2
	22 Riding along with someone on their trip	2	0.1
	97 Other, specify	59	4.2
	Total	1397	100.0
Missing	99 DK/RF	5	
Total		1402	

How many people, including yourself, are in your immediate party and are traveling with you on this specific trip?

		FREQUENCY	PERCENT
Valid	1 1	571	41.6
	2 2	365	26.6
	3 3	153	11.2
	4 4	149	10.9
	5 5 or more	134	9.8
	Total	1372	100.0
Missing	9 RF	30	
Total		1402	

Which of the following currently describes your situation (multiple response)?

		FREQUENCY	PERCENT
Valid	1 Employed full time	497	67.8
	2 Employed part time	106	14.5
	3 Regular volunteer	3	0.4
	4 Retired	84	11.5
	5 Full time homemaker	8	1.1
	6 Unemployed, looking for work	19	2.6
	7 Unemployed, not looking for work	16	2.2
	97 Other, specify	0	0.0
	Total	733	100.0
Missing	99 DK/RF	40	
	System	629	
	Total	669	
Total		1402	

Please describe your type of employment.

		FREQUENCY	PERCENT
Valid	1 Retail	68	11.0
	2 Service – (non-casino hotel/motel/restaurant)	139	22.6
	3 Recreation	99	16.1
	4 Gaming (any employment with casino)	46	7.5
	5 Professional Services	92	14.9
	6 Government	20	3.2
	7 Construction	47	7.6
	8 Service	45	7.3
	97 Other, specify	60	9.7
	Total	616	100.0
Missing	System	786	
Total		1402	

What is your age?

		FREQUENCY	PERCENT
Valid	1 17 - 24	182	13.0
	2 25 - 34	407	29.2
	3 35 - 44	335	24.0
	4 45 - 54	257	18.4
	5 55 - 64	123	8.8
	6 65 and over	92	6.6
	Total	1396	100.0
Missing	9 RF	6	
Total		1402	

What was the total income by all members of your household in 2007?

		FREQUENCY	PERCENT
	1 Above \$50k	397	30.0
	2 Below \$50k	266	20.1
	3 Less then \$10k	16	1.2
	4 \$10k - \$19,999k	28	2.1
	5 \$20k - \$34,999k	58	4.4
	6 \$35k - \$49,999k	91	6.9
	7 \$50k - \$74,999k	116	8.8
	8 \$75k - \$99,999k	94	7.1
	9 \$100k - \$149,999k	133	10.0
	10 \$150k - \$299,999k	90	6.8
	11 \$300k - \$499,999k	22	1.7
	12 Over \$500k	13	1.0
	Total	1324	100.0
Missing	99 DK/RF	78	
Total		1402	

How much money do you anticipate that you will spend on yourself only on this trip to Tahoe?

		FREQUENCY	PERCENT
Valid	1 Less then \$500	391	56.0
	2 \$501 - \$1,000	200	28.7
	3 \$1,001 - \$2,000	72	10.3
	4 Greater then \$2,000	35	5.0
	Total	698	100.0
Missing	99 DK/RF	704	
Total		1402	

Gender

		FREQUENCY	PERCENT
Valid	1 Male	843	60.1
	2 Female	559	39.9
	Total	1402	100.0



APPENDIX C: PILOT MEMORANDUM

MEMORANDUM

To: Karen Fink, Tahoe Regional Planning Agency (TRPA) **Date:** February 15, 2008

From: Chris Simek, NuStats **CC:** Julie Wilke, NuStats

Re: 2008 Tahoe Winter Travel Mode Share Pilot Survey Report

The 2008 Tahoe Winter Travel Mode Share Pilot Survey took place on January 22, 2008 at two Tahoe south shore “high” volume sites – South Y Commercial (Commercial) and Heavenly Ski Resort (Recreational). These sites were selected for the pilot, based on their high volume of traffic. The following memo briefly outlines the overall field application and data collection results.

The pilot began with a surveyor training session held at the TRPA office on Monday January 21, 2008. The training lasted four hours, and ran from 1:30PM to 5:30PM. There were 6 surveyors who participated with two NuStats representatives and Karen Fink of TRPA. All surveyors were recruited from the local Blue Ribbon Personnel Staffing Agency. The four hour training session covered all aspects of intercept interviewing techniques including the methodology, schedule, target completion goals, review of the instrument, practice with mock interviews, refusal conversions, eligibility and respondent selection.

Overall, the pilot data collection effort went extremely well. The table below presents the pilot completion rates at the two sites.

Table 1: Pilot Completion Rates

PILOT SITE SELECTION	COMPLETES	TARGET GOAL	REFUSALS	RESPONSE RATE	REFUSAL RATE
Heavenly Ski Resort	64	60	41	61%	39%
South Y Commercial	58	60	33	64%	36%

The response and refusal rates observed during the pilot effort are in line with our expectations, based on what was observed during the 2006 Travel Mode Share survey.

The morning of the pilot, the interviewer team met at 9:00AM at Harvey’s Hotel and Casino Lobby in Stateline, NV. Heavenly surveyors were transported to their respective survey locations, such that surveying began at 9:30AM and concluded at 4:00PM. South Y commercial surveyors were transported to their site, such that surveying began at 10:15AM and concluded at 5PM.

On average, each interview took approximately 3 to 5 minutes to complete. At South Y Commercial, surveyors were instructed to walk a specific pre-defined route within their assigned sector of the commercial area and approach every 3rd traveling party. The three routes were as follows:

- One surveyor traveled from one end of the strip mall at the corner of US 50 and Lake Tahoe Blvd to the other (the strip mall included a K-Mart and Raley’s) including any businesses further

down on the same side as the strip mall. Once a trip was made to one end of the strip mall, the surveyor repeated this route doubling back to the other side of the strip mall.

- Another surveyor traveled from 10th street and US 50 (both sides of US 50) and along the northbound side of Lake Tahoe Blvd all the way to Truckee Drive, walking past all of the business on that side of the street. At Truckee Drive, the surveyor turned doubled back until they again reach 10th street and then repeated the route (an L-shaped route).
- The third surveyor traveled from E St. and US 50 to US 50 and Lake Tahoe Blvd. covering all of the businesses on the south side of Lake Tahoe Blvd. up through Truckee Drive. This included the Factory Store at the corner of Lake Tahoe Blvd. and US 50 (an L-shaped route). Once the surveyor reached the end of the route, they doubled back repeating the route numerous times throughout the survey day.

At Heavenly, one surveyor was positioned at each of the following locations: (1) Heavenly Village gondola, (2) Cal base, (3) Stagecoach, and (4) Boulder.¹ At the Heavenly Village gondola, the surveyor was positioned at the gondola line and only surveyed those using the gondola. At Cal base, the surveyor was positioned at the lift lines moving between lift lines throughout the day. A third surveyor worked both Stagecoach and Boulder sites splitting the day between lift lines at either site. All surveyors were instructed to approach only respondents age 18 and older. This selection procedure worked well in the field.

Overall, the instrument performed well (see pilot data tables sent with this memorandum for further detail).² One of the most common issues experienced during pilot survey efforts is item non-response, which occurs when the survey data exhibit variables whose responses are comprised of Don't Know / Refuse for greater than 10% of all responses. During the Tahoe pilot effort, only one variable was characteristic of item non-response greater than 10%. Question 19, "How much money do you anticipate that you will spend on yourself only on this trip to Tahoe?" was asked of visitors only and had 11% item non-response. To reduce this to acceptable levels, NuStats recommends changing the wording to "How much money do you anticipate that you will spend on yourself only on this trip to Tahoe? A guess is OK if you're not sure." Furthermore, surveyors will be trained on specific tactics to avoid the Don't Know/Refuse response, such as letting respondents know that these data are very important and will be used for planning purposes only.

Another question that NuStats views as a potential issue is the following: "What is the name of that place?" The instrument is currently annotated to ask this of all respondents (full time residents, seasonal residents and visitors) that do not report coming from "home" in the previous question ("Where are you coming from?"). NuStats would like to verify if this question should be asked of respondents that report they are coming from "lodging" (also captured in response option 1 in "Where are you coming from?"). If surveyors are to capture place name for respondents coming from any place but "home" or "lodging", then NuStats proposes no change to the instrument. However, if surveyors are to capture place name for respondents coming from anywhere but "home", then NuStats proposes to break response option 1 into two separate response options – one response option for "home" and one for "lodging."

Lastly, the "Gondola" response option to the question that asks "What was your primary means of travel to enter the Tahoe Basin" will be removed (it is not a valid response option).

At the end of the day, a debrief session took place where surveyors shared techniques and experiences in converting refusals. Surveyors did not mention any major issues with either the survey instrument or respondent concerns. The main areas of item non-response came from question 19 (mentioned earlier)

¹ During the pilot, only 3 surveyors were available for interviewing at Heavenly. As such, one surveyor was assigned to both Stagecoach and Boulder, rotating between these locations throughout the day.

² Please direct your attention to "valid percent."

and question 10 that asked residents and visitors alike which city they are staying in.³ The importance of obtaining this information from all respondents will again be stressed before beginning of the full study.

A review of the completed surveys showed that the surveyors did an excellent job of filling in the information correctly and honoring the proper skip patterns in the survey.

It should be noted that, during the pilot, Heavenly Ski Resort was conducting their own survey of patrons regarding use of the resort. This additional survey effort, which was not known to NuStats prior to arriving at the facility, did not appear to have a negative impact on pilot survey response.

In conclusion, the overall pilot methodology worked well; however, minor modifications to the instrument and to the interviewer training⁴ will increase data quality for the full study. NuStats respectfully requests to receive comment back from TRPA no later than close of business Thursday 2/14/08.

³ Only 2 of all 122 respondents did not provide either city or zip. It is NuStats understanding that both data elements are not required. Rather, city or zip is acceptable.

⁴ At commercial areas, interviewers will be instructed to ask respondents to point in the direction of the place that they just came from (in response to the question that asks What is the name of that place?") to ensure that the respondent is not indicating a location that is within the survey area. If the surveyor discerns that a respondent is indicating that the start of their trip originated from within the survey area (unless it was their place of lodging), the surveyor will re-ask the question and obtain the location the respondent was at before they entered the commercial area.



APPENDIX D: PRESS RELEASE

TAHOE REGIONAL PLANNING AGENCY

128 Market Street
Stateline, Nevada
www.trpa.org

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(775) 588-4547
Fax (775) 588-4527
Email: trpa@trpa.org

NEWS RELEASE

Contact: Dennis Oliver, Communications Representative, 775-589-5235

For Immediate Release

February 11, 2008

DATA COLLECTION FOR TRAVEL MODE SURVEY BEGINS IN THIS MONTH

STATELINE, NV – February 11, 2008 – The Tahoe Regional Planning Agency will conduct travel surveys

with visitors and residents at 19 commercial and 23 recreational locations throughout the Basin beginning Friday, February 22. The interviewing, to be carried out by a professional survey research company, is scheduled to take place through Saturday, March 1. Surveyors will wear badges while patrolling survey sites. Results from the Travel Mode Survey will be used to track the success of and help plan multi-modal travel options around Lake Tahoe. The short paper-based survey is intended primarily to gather data on travel patterns to commercial and recreation areas, but also will be used to collect visitor-specific data and demographic information. The data will be used solely for the transportation planning process. TRPA will adopt a new regional transportation plan next year.

“This study is part of the planning agency’s ongoing transportation monitoring program,” commented Nick Haven, Transportation Team Leader, TRPA. “We appreciate the participation of local employers and organizations, as we could not effectively gather this data without them. We also appreciate the time and information provided by each survey participant as their input and participation will assist in shaping transportation solutions throughout Lake Tahoe,” continued Haven. “Results of the study will be made available to the public.”

The Travel Mode Survey is being conducted by NuStats, an independent, accredited survey research company, and the same firm who implemented previous transportation-related studies in Reno, Lake Tahoe, Sacramento, and San Francisco.

For more information about the study, please contact Karen Fink, Transportation Planner, Tahoe Regional Planning Agency, at 775.588.4547, ext. 204 or kfink@trpa.org.

Created by California and Nevada, and an act of Congress in 1969, the Tahoe Regional Planning Agency cooperatively leads the effort to preserve, restore, and enhance the unique natural and human environment of the Lake Tahoe region now and in the future.



APPENDIX E: INTERVIEWER TRAINING MANUAL

2008 Tahoe Winter Mode Share Survey – Surveyor Training

Introduction:

Welcome to the 2008 Winter Travel Mode Survey team. You have been specially selected to work on an important survey conducted with visitors and residents of the Tahoe Basin Area. This study, sponsored by the Tahoe Regional Planning Agency, will be an essential factor for future planning efforts to improve non-auto travel in and around the North and South Shores of Lake Tahoe.

Work Schedule:

Orientation And Pilot Test: January 22, 2008

Full Study: February 22 March 1 , 2008 (Weekdays And Weekends)

Normally, Surveying Will Be Conducted From 9am To 5pm With A Break For Lunch. On Certain Days However, The Schedule May Be Altered By One Or Two Hours. Surveyors Will Be Working 40 Hours Per Week So The Supervisor Will Coordinate A Work Schedule To Allow For Days Off. Your Flexibility Is Appreciated So A Full Crew Is Working Monday Through Sunday.

Dress Code/Work Expectations:

You will be provided with a TRPA hat to wear each day you are surveying along with an ID Badge. Please wear all these items to project legitimacy and a professional appearance for your work.

Since we will be working outdoors each day, please dress adequately for the cold. Dress professionally and please remove unusual piercings.

You are welcome to bring bottled water and a snack. Remember that you will be carrying supplies with you so don't overload yourself with unnecessary items.

On days when it will be difficult to access a restaurant for the lunch break, you will be notified in advance and to either bring a sack lunch or lunch will be provided for you.

The supervisor will advise you of lunch time and break periods. Please return promptly to work when break periods are over.

We want to carpool to locations as much as possible. Please plan to be at the meeting location 5 minutes prior to when the carpool is scheduled to leave. We cannot wait for late arrivals.

In the event of an emergency, please contact the supervisor.

Study Design

We will be surveying popular commercial and recreation sites located in the North and South Shore area of the Tahoe Basin. Typically, we will be surveying multiple sites in one day – but these sites will be close together so we don't lose much travel time.

Each site has a specific goal of interviews that needs to be conducted and all data completely and accurately collected. Your supervisor will advise you of the goal for each site. We will work as a team to make goal.

Work Tasks:

It is important that you are completely familiar with the survey instrument. Beside the practice you receive during training, practice independently with friends and family members. If you are unsure about what data a question is capturing, ask the supervisor for clarification.

As a surveyor, you will be approaching visitors and residents (over the age of 18) and asking them to participate in a brief five-minute survey. All information collected in the survey is confidential and not identified with any single individual. Participation is voluntary.

At each survey site, your supervisor will designate the location where you will be stationed to approach a respondent. Only one respondent in a traveling party may participate in the study. At certain sites, you may be asked to approach every nth travel party – in order to insure randomness of participation and not bias study results due to mode of travel or demographic self-selection. (Your supervisor will advise you daily about the approach pattern.)

Politely invite a member of the travel party to participate in the study by saying:

Hello. My name is _____ and I'm conducting a study on behalf of the Tahoe Regional Planning Agency. I'm interviewing residents and visitors in the region about their daily travel activities. This study will take no longer than 5-minutes and will benefit the community by providing information about local travel patterns for better transportation planning. The study is purely a research effort, your participation is voluntary and your answers will be completely confidential.

If a member of the travel party agrees to participate, confirm that he or she is 18 years old or older. If the participant is under age 18, attempt to interview another member of the travel part who meets the age requirements.

If no member of the travel party wishes to participate in the study, politely stress the importance of participating. If no one still wishes to participate, thank them for their time and tally the group as a single refusal.

Conduct the survey by reading each question on the questionnaire exactly as written. All questions must be answered in order for the questionnaire to count toward the interview site goal. Please completely fill in bubble responses and print text responses neatly.

IT IS EXTREMELY IMPORTANT that address information is fully collected and accurate. If a respondent does not know an exact address, show him/her the map you are provided with and determine exact cross streets. Verify that cross streets are identified correctly by finding that intersection on the map.

After you complete five interviews at a site, return the completed questionnaires to the supervisor so a count may be made to determine if goal has been reached. All questionnaires will be reviewed and surveyors will receive constructive feedback.

Finally, have fun, be friendly. Enjoy working on this project.



APPENDIX F: SITE SPECIFIC SURVEY RATES

SITE #	LOCATION	REFUSALS	COLLECTED SURVEYS	CONTACTS	REFUSAL RATE	RESPONSE RATE	COMPLETES / HOUR
1	Bijou/al Tahoe	13	25	38	34%	66%	6.25
2	Dollar Hill	5	6	11	45%	55%	3.43
3	Homewood Commercial	3	6	9	33%	67%	12.00
4	Incline Village Commercial	9	50	59	15%	85%	7.14
5	Kings Beach Commercial	68	34	102	67%	33%	5.23
6	Kingsbury Community Plan	3	22	25	12%	88%	6.29
7	Meyers	4	22	26	15%	85%	8.80
8	North Casinos	13	34	47	28%	72%	5.23
9	North Stateline Non Casino	13	11	24	54%	46%	3.67
10	Round Hill Community Plan	24	59	83	29%	71%	7.38
11	Sierra Tract	12	25	37	32%	68%	6.25
12	Ski Run	48	57	105	46%	54%	4.07
13	South Stateline	113	70	183	62%	38%	4.38
14	South Y Commercial	33	58	91	36%	64%	3.36
15	Stateline Community Plan	12	73	85	14%	86%	9.13
16	Sunnyside	1	5	6	17%	83%	10.00
17	Tahoe City	41	51	92	45%	55%	3.24
18	Tahoe Vista Commercial	5	8	13	38%	62%	5.33
19	Tahoma Commercial	6	5	11	55%	45%	6.67
20	Alpine Meadows (Backside)	1	20	21	5%	95%	7.27
21	Bijou Cross Country Ski Area	0	14	14	0%	100%	2.55
22	Camp Richardson Resort	9	29	38	24%	76%	3.87
23	Commons Beach	13	20	33	39%	61%	3.20
24	Cove East/Upper Truckee Marsh	1	24	25	4%	96%	3.00
25	Diamond Peak Ski Resort	25	60	85	29%	71%	3.87
26	El Dorado Beach/Boat Ramp	3	25	28	11%	89%	8.33
27	Granlibakken Ski Resort	9	32	41	22%	78%	6.74
28	Heavenly Ski Resort	50	127	177	28%	72%	5.29
29	Homewood Ski Resort	26	61	87	30%	70%	7.63
30	Incline Village Recreational Center	2	25	27	7%	93%	9.09
31	Kahle Community Center and Park	3	26	29	10%	90%	6.93
32	MS Dixie Entrance (at Zephyr Cove)	6	25	31	19%	81%	1.96
33	North Tahoe Conference Center	5	2	7	71%	29%	0.57
34	North Tahoe Regional Park	9	50	59	15%	85%	5.00
35	Paige Meadows	4	20	24	17%	83%	3.20
36	South Tahoe Ice Arena	3	23	26	12%	88%	4.60
37	South Tahoe Recreation Center	6	29	35	17%	83%	11.60
38	South Tahoe Senior Center	4	22	26	15%	85%	5.87
39	Spooner Junction Snow Play Area	0	25	25	0%	100%	9.09

SITE #	LOCATION	REFUSALS	COLLECTED SURVEYS	CONTACTS	REFUSAL RATE	RESPONSE RATE	COMPLETES / HOUR
40	Spooner Lake Cross Country Ski Resort	3	25	28	11%	89%	3.70
41	Tahoe Cross Country Ski Area	2	24	26	8%	92%	9.60
42	Zephyr Cove Marina/Resort	7	75	82	9%	91%	5.17
Total	N/A	617	1,404	2,021	31%	69%	4.96



APPENDIX G: SAMPLING PLAN

This document describes the sample design for the Tahoe Winter Travel Mode Share Survey of Commercial and Recreational Areas. As such, it includes project objectives, the population of inference, description of the sampling frames, sample preparation, proposed sample sizes and conduct of the interview.

MEMO

To: Karen Fink, TRPA

From: Julie Wilke, NuStats

CC: Chris Simek, NuStats

Re: Tahoe Winter Travel Mode Share Survey Sample Memo

This document describes the sample design for the Tahoe Winter Travel Mode Share Survey of Commercial and Recreational Areas. As such, it includes project objectives, the population of inference, description of the sampling frames, sample preparation, proposed sample sizes and conduct of the interview.

Project Objectives

The research objectives for this effort include:

- Building on the current understanding of the travel mode split to commercial and recreational areas as a whole in the Tahoe Basin, and
- Beginning a data collection effort that can be repeated biennially, producing a trend line that will show whether transportation strategies are working to increase non-auto mode share.

The sample methodology proposed here is designed to capture accurate and reliable travel mode data of residents, seasonal residents, and visitors to commercial and recreational sites within the Tahoe Basin region. These methods are, to a large extent, based on methods developed, implemented and tested as part of the 2006 Travel Mode Share Survey.

Population of Inference

The population of inference (or population under study) consists of residents (both year round and seasonal) and visitors 18 years of age or older in the Tahoe region during the survey period.

Sampling Frame

The commercial sampling frame consists of 24 recreational locations within the Tahoe region. The recreational sampling frame consists of 19 commercial locations within the Tahoe region. These sites were provided to NuStats by TRPA and served as the basis for this sampling effort.

Proposed Sample Size

To accomplish the survey goals, NuStats proposes a sample plan that provides a confidence level of 95% with a standard error rate of 4.0 (or 600 samples) for the commercial subgroup and 95% with a standard error of 3.6% (or 750 samples) for the recreational sites subgroup. These sample sizes were determined by taking into account several considerations including desired levels of statistical precision, data needs, expected survey productivity, project schedule and project budget. The following formula was used to determine the standard error associated with the sample size.

$$\text{Standard Error} = 1.96 * (\sqrt{(0.5)(0.5)/n}), \text{ where } n = \text{sample size}$$

The 600 commercial surveys will be conducted at 19 sites across the Tahoe Region. Of these 600 commercial surveys, 60% will be conducted at South Shore sites, with the remaining 40% coming from North Shore sites.⁵ An additional level of stratification was included to identify the expected level of activity at each interview location. These levels (determined by members of TRPA and the NuStats project team, as well as members of a steering committee that was developed for this particular survey) include low, medium and high activity and are included in Table 1 below in the “Rank” field. This rank variable was used as an additional level of stratification to determine the number of surveys estimated for each interview location. Within each “shore” an attempt was made to assign half of all interviews to high activity sites. Of the remaining sites, two-thirds of surveys were assigned to medium activity sites and the remaining surveys were assigned to low activity sites. Among sites of the same activity level, a near equal distribution of surveys was assigned. However, in some cases, rounding up or down was necessary. Furthermore, in some cases, it was necessary to deviate slightly from this method to differentiate the number of surveys coming from sites of different rank, as is the case with the two south shore commercial medium rank sites, where, based on the method described above, one would expect to see 67 surveys assigned to each of these sites. In order to differentiate from the high rank commercial sites, the number of assigned surveys to these two sites was reduced to 55.

⁵ This 60/40 split was also used in the most recent surveys conducted by NuStats for TRPA and is being repeated here for consistency.

TABLE 1: DISTRIBUTION OF COMMERCIAL SURVEYS BY INTERVIEW LOCATION

AREA	RANK	SHORE	SURVEYS
Sunnyside	Low	North	5
Homewood Commercial	Low	North	6
Tahoma Commercial	Low	North	5
North Stateline Casinos	Low	North	6
Tahoe Vista Commercial	Low	North	5
Dollar Hill	Low	North	6
North Stateline Non-Casino	Medium	North	33
King's Beach Commercial	Medium	North	34
Tahoe City	High	North	50
Incline Village Commercial	High	North	50
Subtotal North Shore	N/A	N/A	200
Meyer's Commercial	Low	South	22
Sierra Tract	Low	South	23
Bijou/Al Tahoe Community Plan Area	Low	South	22
Kingsbury Community Plan	Low	South	23
Ski Run	Medium	South	55
Round Hill Community Plan	Medium	South	55
South "Y" Commercial	High	South	66 ⁶
Stateline Community Plan	High	South	67
South Stateline	High	South	67
Subtotal South Shore	N/A	N/A	400
Total	N/A	N/A	600

The 750 recreational surveys will be conducted at 24 sites across the Tahoe Region. Of these 750 recreational surveys, 60% will be conducted at South Shore sites, with the remaining 40% coming from North Shore sites. See Table 2 for further detail. For the north Shore an attempt was made to assign half of all recreational interviews to high activity sites. Of the remaining sites, two-thirds of surveys were assigned to medium activity sites and the remaining surveys were assigned to low activity sites. This was similar to the methodology used for assignment of surveys to the commercial locations. For the south shore sites, a new level of activity was added to account for Zephyr Cove Marina-Resort – Medium-High. This was originally a high activity site, and assigned a survey goal of 112 surveys. However, during pre-survey discussions, it was decided that obtaining this number of survey completes would be extremely difficult. As such, it was decided to reduce the target survey goal to 75, and distribute the remainder of the surveys among the low and medium activity level sites.

⁶ Assuming no major changes to the instrument between the pilot and full study, the pilot surveys collected at South "Y" Commercial will count toward the full study goals.

TABLE 2: DISTRIBUTION OF RECREATIONAL SURVEYS BY INTERVIEW LOCATIONS

AREA	SHORE	RANK	SURVEYS
Alpine Meadows (back side)	North	Low	17
Tahoe City Golf Course	North	Low	16
Paige Meadows	North	Low	17
Incline Village Recreation Center	North	Medium	20
North Tahoe Conference Center	North	Medium	20
Granlibakken Ski Resort	North	Medium	20
Commons Beach	North	Medium	20
Tahoe Cross-Country Ski Area	North	Medium	20
Diamond Peak Ski Resort	North	High	50
North Tahoe Regional Park	North	High	50
Homewood Ski Resort	North	High	50
Subtotal North Shore	N/A	N/A	300
El Dorado Beach/Boat Ramp	South	Low	21
Bijou Cross-Country Ski Area	South	Low	23
South Tahoe Senior Center	South	Low	22
Spooner Junction, Snow Play Area	South	Low	23
South Tahoe Ice Arena	South	Medium	24
South Tahoe Recreation Center	South	Medium	26
Cove East/Upper Truckee Marsh	South	Medium	24
Camp Richardson Resort	South	Medium	26
MS Dixie Entrance (at Zephyr Cove)	South	Medium	24
Kahle Community Center and Park	South	Medium	26
Spooner Lake Cross Country Ski Resort	South	Medium	24
Zephyr Cove Marina-Resort	South	Medium-High	75
Heavenly Ski Resort	South	High	112
Subtotal South Shore	N/A	N/A	450
Grand Total	N/A	N/A	750

It is important to note that, while NuStats will make every effort to capture the number of completed surveys per site identified in Tables 1 and 2 above, the sample plan should be flexible enough to accommodate variations in activity levels at each site that differ from what is expected. As such, these numbers should be viewed as goals, not hard quotas. As these numbers goals are based partially on productivity estimates calculated based on summer data collection, NuStats expects that deviations from the goals identified here will occur.⁷ The field manager will contact the TRPA project manager on a daily basis to identify if the goal is realistic based on field observation. If these variations do occur, NuStats will consult with TRPA on the

⁷ An example of this is Zephyr Cove Marina-Resort, where, in the most recent travel mode survey, a total of 40 surveys were collected over a 3.5-hour period. NuStats will use this survey effort to refine the survey goals to ensure that future survey sampling efforts are repeatable and realistic.

best method for continued data collection and will not move forward with this method until all project team members reach agreement. Timely decision making will be critical to the successful completion of the project per the project schedule, should these variations occur.

Pre-Survey Communication

Prior to the full study, a list of site contacts was developed. This list contained, for each site, key contacts and contact information, so that they could be contacted prior to data collection, and provided details of the survey effort. The first official contact with each site was an advance letter that contained such information as survey sponsor, survey goals, data collection schedule, study expectations, and contact information should there be any further questions. A week or so after sending the advance letter, a reminder letter will be sent to each site. This letter will thank the site contacts for agreeing to participate, will contain the exact date and time that the interviewers would be present at each facility, and will ask each site contact to remind their employees to be aware of this effort.

In addition to the advance and reminder letters, a press release was drafted and provided to TRPA and members of the steering committee for approval. The press release was geared toward “spreading the word” about the survey to residents of the Tahoe Region. The press release will contain such information as study sponsor, study goals, study schedule, introduction to NuStats and contact information should anyone have any questions or concerns regarding the survey.

Finally, an e-mail blast will be sent to potentially affected local chambers of commerce to ensure that local officials are aware of the survey activities.

Conduct of Interviews

Trained temporary staff will collect the data via intercept interviews. Pilot data collection took place on January 22, 2008, at Heavenly Ski Resort and South Y Commercial. Approximately 120 surveys were collected over a 7-hour period. For further information regarding the pilot survey, please see the Pilot Memorandum. Full study data collection will take place from February 22, 2008 to March 1, 2008. Both weekend and weekday interviewing will take place.

Commercial sites ranked “low” will be primarily interviewed during weekend periods (Friday, Saturday and Sunday), while medium and high sites will be interviewed both weekend and weekday. Recreational sites will be interviewed during both periods. The survey period will encompass two weekend periods. Core data collection time will be from 10:00 A.M. to 5:00 P.M. However, flexibility will be retained for early morning work or evening work as necessary to accommodate special schedule needs.

Our sampling methodology assumes that only one person, age 18 or older, within a traveling party will be eligible to participate in the study. To minimize surveyor selection bias surveyors will be instructed to survey every nth party at sites with high activity level and perform a census study at sites with low or medium activity levels. Travel parties refusing to participate in the study will be tallied and recorded for tracking of response rates and for data weighting and expansion purposes (if

individual site patronage volumes are available to use as the targeted expansion factor).

Surveyors will be stationed at locations that attempt to maximize both their exposure to potential respondents and their exposure to respondents utilizing different modes of transportation. The actual survey locations have been determined in conjunction with TRPA staff and site contacts during site visits that were conducted prior to interviewer training. The following practices will be implemented to minimize bias introduced into the data as a result of interviewer location:

- In areas where interviewing is restricted to entrances and multiple entrances are present, interviewers will be instructed to move between entrances every 20-30 minutes.
- In areas where there is sufficient traffic, surveyors will intercept every nth travel party to minimize self-selection bias for travel mode or demographics. The survey pattern will vary based on activity level.
- At commercial areas, surveyors will patrol all sidewalks in order to cover the whole survey area, unless sidewalks are impassable due to snow. In that case, the project manager will limit surveyors to specific shopping areas, and record carefully which shopping areas were covered and which were not.
- At sites that offer “strip mall” like conditions (where multiple stores are present, one after another), emphasis will be placed on the fact that the interviewer is interested in collecting information regarding the last place the respondent was (origin) before they came to this general location (i.e., the commercial area or the recreation area - destination), as opposed to telling the interviewer they just came from a different store within that same commercial area, or that they left from home early in the morning but are now on their 4th location during the day.
- The project manager will carefully record the exact locations and patrolling areas where surveyors were located, so that the survey methodology can be closely repeated in future years. The project manager will also record the exact times that each location was surveyed.

NuStats feels by implementing these best management practices, TRPA will gain an accurate picture of the mode split in the region. Furthermore, the diversity of survey sites that have been selected for sampling purposes prohibits any one method of establishing interviewer location to consistently be applied to all sites, while maintaining the project scope, timeline and budget. For this reason, we respectfully request that TRPA allow NuStats to conduct the sampling as identified within this document.

The table on the following page provides detailed information regarding the proposed dates each intercept site will be surveyed.

2008 Tahoe Winter Mode Share Survey Sample Plan										
Date	DOW	Site	Site Type	Location	Rank	Address	City	State	Zip	#Surveyors
2/22/2008	Friday	Granlibakken Ski Resort	Recreation	North Shore	Medium	725 Granlibakken Rd.	Tahoe City	CA	96145	2
		North Tahoe Conference Center	Recreation	North Shore	Medium	8318 N. Lake Blvd.	Kings Beach	CA	96143	1
		Tahoe City	Commercial	North Shore	High					3
		Meyer's	Commercial	South Shore	Low					3
		Sierra Tract	Commercial	South Shore	Low					4
		Zephyr Cove Marina-Resort	Recreation	South Shore	Medium-High					2
2/23/2008	Saturday	Tahoma	Commercial	North Shore	Low					1
		Homewood	Commercial	North Shore	Low					2
		Sunnyside	Commercial	North Shore	Low					2
		Homewood Ski Resort	Recreation	North Shore	High	5141 Westlake Blvd.	Homewood	CA	96141	2
		Paige Meadows	Recreation	North Shore	Low					3
		Heavenly Ski Resort	Recreation	South Shore	High	Wildwood & Saddle	South Lake Tahoe	CA	96150	3
2/24/2008	Sunday	Alpine Meadows (back side)	Recreation	North Shore	Low					1
		Diamond Peak Ski Resort	Recreation	North Shore	High	1210 Ski Way	Incline Village	NV	89451	2
		Incline Village Recreational Center	Recreation	North Shore	Medium	980 Incline Way	Incline Village	NV	89451	2
		Tahoe Vista	Commercial	North Shore	Low					1
		Dollar Hill	Commercial	North Shore	Low					2
		Incline Village	Commercial	North Shore	High					4
		Kings Beach	Commercial	North Shore	Medium					3

Date	DOW	Site	Site Type	Location	Rank	Address	City	State	Zip	#Surveyors
2/25/2008	Monday	Tahoe City Golf Course	Recreation	North Shore	High	251 N. Lake Blvd	Tahoe City	CA	96145	2
		Commons Beach	Recreation	North Shore	Medium	downtown Tahoe City	Tahoe City	CA	96145	1
		Tahoe Cross-Country Ski Area	Recreation	North Shore	Medium	925 Country Club Drive	Tahoe City	CA	96145	2
		North Tahoe Regional Park	Recreation	North Shore	High					2
		North Stateline Non-Casino	Commercial	North Shore	Medium					2
		North Stateline Casinos	Commercial	North Shore	Low					3
2/26/2008	Tuesday	Bijou Corss-Country Ski Area	Recreation	South Shore	Low	Hwy 50 to Al Tahoe Blvd.	South Lake Tahoe	CA	96150	2
		El Dorado Beach/Boat Ramp	Recreation	South Shore	Low	Hwy 50 & Lakeview Ave.	South Lake Tahoe	CA	96150	2
		South Tahoe Senior Center	Recreation	South Shore	Low	3050 Lake Tahoe Blvd.	South Lake Tahoe	CA	96150	1
		South Tahoe Ice Arena	Recreation	South Shore	Medium	1176 Rufus Allen Blvd.	South Lake Tahoe	CA	96150	1
		South Tahoe Recreation Center	Recreation	South Shore	Medium	1180 Rufus Allen Blvd.	South Lake Tahoe	CA	96150	1
2/27/2008	Wednesday	Spooner Junction, Snow Play Area	Recreation	South Shore	Low					2
		Spooner Lake Cross Country Ski Resort	Recreation	South Shore	Medium					3
		MS Dixie Entrance (at Zephyr Cove)	Recreation	South Shore	Medium					1
		Kahle Community Center and Park	Recreation	South Shore	Medium	236 Kingsbury Grade	Stateline	NV	89449	2
2/28/2008	Thursday	Ski Run	Commercial	South Shore	Medium					3
		Round Hill Community Plan	Commercial	South Shore	Medium					2
		Camp Richardson Resort	Recreation	South Shore	Medium	1900 Jameson Beach Rd.	Tahoe Valley	CA	96158	5
		Cove East/Upper Truckee Marsh	Recreation	South Shore	Medium					2
2/29/2008	Friday	Bijou/Al Tahoe Community Plan Area	Commercial	South Shore	Low					4
		Kingsbury Community Plan Area	Commercial	South Shore	Low					4
		Stateline Community Plan	Commercial	South Shore	High					8
		South Stateline	Commercial	South Shore	High					6
3/1/2008	Saturday	Make-up Day								